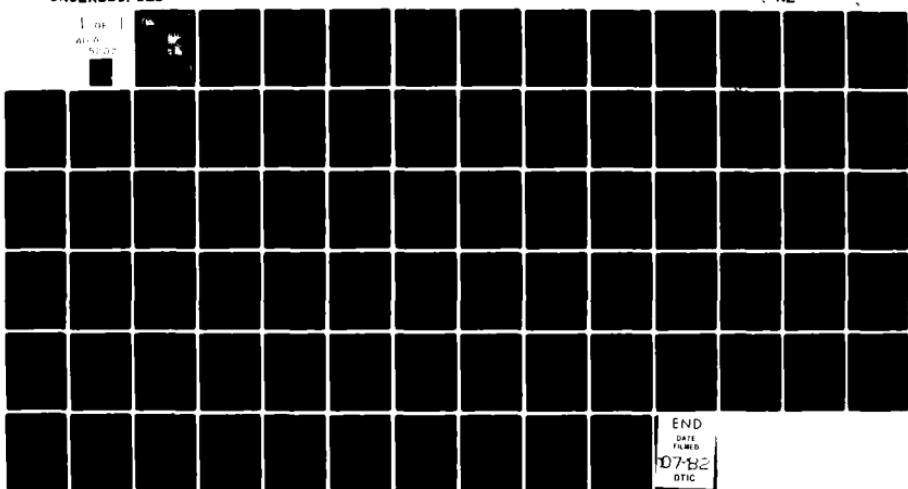


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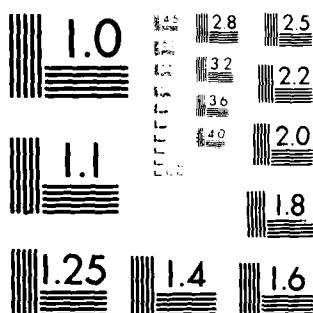
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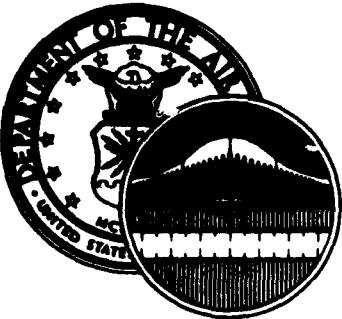
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OCCUPATIONAL SURVEY REPORT



INTEGRATED AVIONICS INSTRUMENT AND FLIGHT
CONTROL SYSTEMS CAREER LADDER

AFS 326X7A/B/C

AFPT 90-326-428F

MARCH 1982

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OCCUPATIONAL ANALYSIS PROGRAM
USAF OCCUPATIONAL MEASUREMENT CENTER
AIR TRAINING COMMAND
RANDOLPH AFB, TEXAS 78150

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AFHRL/LRT		1	1m	1m/1h
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AFMEA/MEMD	1	1	1h	1
AFMPC/MPCHS	1	1		
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HQ PACAF/DPAT	3	3		3
HQ SAC/LGMQ (ATCLO)	1	1		1
HQ SAC/DPAT	3	3		3
HQ TAC/DPLATC	1	1		1
HQ TAC/DPAT	3	3		3
HQ USAF/MPPT	1	1		1
HQ USAFE/DPAT	3	3		3
HQ USAFE/DPATC	1	1		1
HQ USMC/OMU	1	1		
LMDC/AN	1			
LTTC	5	2	2h	9p*
NODAC	1	1		
388 TFW/MAT	2	2		2
3507 ACS/DPUI	1	1		
3785 FLDTG/TTFO	2	2		2

* per shred, total = 27

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PREFACE

This report presents the results of a detailed Air Force occupational survey of the Integrated Avionics Instrument and Flight Control Systems career ladder, AFS 326X7A/B/C. This study was requested by HQ ATC/TTQ and the 3400 TCHTW/TTGX at Lowry AFB CO. Authority for conducting occupational surveys is contained in AFR 35-2. Computer outputs from which this report was produced are available for use by operating and training officials.

The survey instrument used in the present project was developed by Mr J. Michael Bozardt, Inventory Development Specialist. Second Lieutenant Carlton F. Middleton analyzed the survey data and wrote the final report. This report has been reviewed and approved by Lieutenant Colonel Jimmy L. Mitchell, Chief, Airman Career Ladders Analysis Section, Occupational Analysis Branch, USAF Occupational Measurement Center, Randolph AFB, Texas 78150.

Copies of this report are distributed to air staff sections, major commands, and other interested training and management personnel. Additional copies may be obtained upon request to the USAF Occupational Measurement Center, attention to the Chief, Occupational Analysis Branch (OMY), Randolph AFB, Texas 78150.

This report has been reviewed and is approved.

PAUL T. RINGENBACH, Col, USAF
Commander
USAF Occupational Measurement
Center

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Chief, Occupational Analysis Branch
USAF Occupational Measurement
Center

SUMMARY OF RESULTS

1. Survey Coverage: Inventory booklets were administered to Integrated Avionics Instrument and Flight Control Systems incumbents during 1980. The 477 personnel in the final survey sample represent 73 percent of the total career ladder.
2. Specialty Jobs (Career Ladder Structure): The 326X7 technical jobs have a substantial degree of commonality; however, the instrument and flight control systems of F/FB-111, F-15, and F-16 aircraft differ enough to identify separate jobs based on which of the aircraft are maintained. The non-technical jobs performed in the 326X7 career ladder include instructors, quality control inspectors, and administrative personnel.
3. Career Ladder Progression: Three- and 5-skill level incumbents in all three shreds perform an almost exclusively technical job. The 7-skill level personnel report both a technical and a supervisory/managerial job. Forty-four percent of the 7-skill level respondents group with the non-technical personnel identified in the career ladder structure. The remaining 7-skill level individuals are interspersed in other jobs doing both technical and non-technical tasks. The analysis of experience (TAFMS) groups shows a similar trend of progression from a more to a less technical job.
4. Analysis of Job Satisfaction: Comparison of job satisfaction indices of first-enlistment personnel in each shred to a comparative sample of similar maintenance career ladders shows comparable or higher satisfaction for the 326X7 first termers. More experienced 326X7 personnel had similar job satisfaction to the comparative sample.
5. Analysis of AFR 39-1: Comparison of the AFR 39-1 Specialty Descriptions to occupational survey data for the 3- and 5-skill level groups and the 7-skill level group indicate that the descriptions portray the general jobs performed by these groups. No changes are recommended at this time.
6. Training Analysis: Disagreement among training emphasis and task difficulty raters made these ratings unreliable for use, thus limiting analysis of training. Examination of the 326X7A, 326X7B, and 326X7C Specialty Training Standards (STS) in light of occupational survey data revealed no apparent deficiencies in the STSs as they are presently written.
7. Implications: The jobs identified in this study support the present shredout classification structure. One minor problem surfaced through write-in comments from personnel working on the B-1 test program; however, their situation should be resolved as the B-1 system becomes operational.

OCCUPATIONAL SURVEY REPORT
INTEGRATED AVIONICS INSTRUMENT AND FLIGHT CONTROL SYSTEMS
(AFSC 326X7A/B/C)

INTRODUCTION

This is a report of an occupational survey of the Integrated Avionics Instrument and Flight Control Systems career ladder (AFSC 326X7A/B/C) completed by the Occupational Analysis Branch, USAF Occupational Measurement Center, in March 1982. The primary purpose of this study is to evaluate the effectiveness of current training programs.

Background

Personnel in former AFS 326X2B (Integrated Avionic Systems, Flight Control and Integrated Mechanical Instrument Duties) maintained aircraft instrument and flight control systems from January 1972 until April 1979. On 30 April 1979, restructuring of all Integrated Avionics Maintenance specialties went into effect. This restructuring resulted in separate specialties for flightline maintenance of attack control systems (AFS 326X6), instrument and flight control systems (AFS 326X7), and communications, navigation, and penetration aids systems (AFS 326X8). Additionally, each of these new specialties was further divided through the 5-skill level into three shreds specifying the aircraft maintained:

- A shred - F/FB-111
- B shred - F-15
- C shred - F-16

Seven-skill level incumbents have no shred and are assigned to units having any of the aircraft within their specialty. Also, there is a common 9-skill level for all 326XX career ladders.

As described by AFR 39-1, the basic job of 326X7 personnel consists of inspecting, maintaining, installing, troubleshooting, and analyzing integrated avionic instrument and flight control systems for malfunctions. The job includes testing systems for malfunctions, removing faulty units, installing serviceable line replaceable units, and performing systems alignment and harmonization. Common equipment maintained includes automatic flight control systems, air inlet control systems, and built-in test systems.

Completion of a basic integrated avionics instrument and flight control systems course, as well as a Field Training Detachment (FTD) course is mandatory for AFSC assignment. The basic course for all 326X7 personnel (Course G3AQR32637-002) is offered at Lowry AFB CO and lasts approximately 24 academic days. After the successful completion of this course, individuals attend one of five FTD courses offered, depending on which 326X7 shred they are entering. Three FTD courses are offered for A-shred personnel, with each course being specifically geared to a certain model or models of the General Dynamics F/FB-111 aircraft. One FTD course is offered for all B-shred (F-15) airmen and one course is offered for all C-shred (F-16) airmen.

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SURVEY METHODOLOGY

Inventory Development

A single job inventory (AFPT 90-326-428F) served to collect data for the 326X6, 326X7, and 326X8 career ladders. As a starting point for the 326X7 section of the inventory, the inventory developer reviewed the previous 1976 inventory of AFS 326X2B for currency. A thorough review of pertinent career ladder publications and directives identified additional tasks. From this review process, the inventory developer compiled a new tentative task list for the 326X7 career ladder. He then took this tentative task list to the technical school and several operational units for validation by experienced senior personnel. Eleven 326X7 subject matter specialists in eight operational units assisted the developer. Experienced personnel critiqued the entire inventory and made recommendations to add, subtract, or rework tasks. A final inventory emerged, consisting of 852 tasks under 25 duty headings covering the 326X6, 326X7, and 326X8 career ladders. An extensive background section with questions regarding job title, job satisfaction, organizational level, and similar types of information was combined with the task inventory.

Survey Sample

One hundred percent of the 326X7 population was solicited to participate in this survey to ensure a representative sample across all segments of the career ladder. Table 1 reflects the major command distribution of the personnel assigned to the 326X7 career field as of June 1980. Tables 2, 3, and 4 provide the major command distribution for each shred. The percentage distribution by paygrade for the 326X7 group is in Table 5. Table 6 displays the survey sample in terms of TAFMS groups. Overall, 477 incumbents returned inventories for a 73 percent sample of the total population.

Task Factor Administration

In addition to completing a job inventory booklet, selected senior personnel assigned to F-15, F-16, F-111 and FB-111 units completed a second booklet for either training emphasis or task difficulty. From these booklets, average task difficulty and average training emphasis ratings are computed for each task in the job inventory. These ratings help in analyzing the training programs in the career ladders because they provide an indication of what the senior personnel in the ladder feel are the most difficult tasks and the tasks where training is most crucial. Unfortunately, the 326X7 training emphasis and task difficulty ratings showed little agreement among raters and thus could not be used in analysis.

TABLE 1
COMMAND REPRESENTATION OF SURVEY SAMPLE
(TOTAL 326X7A/B/C SAMPLE)

<u>COMMAND</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>
TAC	54	52
USAFE	20	24
SAC	7	8
ATC	4	7
PACAF	5	6
OTHER	<u>10</u>	<u>3</u>
TOTAL	100	100

TOTAL ASSIGNED* - 744

TOTAL ELIGIBLE FOR SURVEY - 653**

TOTAL SAMPLE - 477

PERCENT OF ASSIGNED IN SAMPLE - 73%

* ASSIGNED STRENGTH AS OF JUNE 1980

** EXCLUDES THOSE IN PCS STATUS, STUDENTS, HOSPITALIZED PERSONNEL,
AND PERSONNEL WITH LESS THAN SIX WEEKS ON THE JOB

TABLE 2
COMMAND REPRESENTATION OF SURVEY SAMPLE
326X7A

<u>COMMAND</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>
TAC	46	44
USAFE	28	33
SAC	16	16
ATC	3	3
OTHER	<u>7</u>	<u>4</u>
TOTAL	100	100

TOTAL A-SHRED PERSONNEL ASSIGNED* - 317

TOTAL A-SHRED PERSONNEL ELIGIBLE FOR SURVEY** - 267

NUMBER OF RESPONDENTS INDICATING AN A-SHRED DAFSC SUFFIX - 189

* ASSIGNED STRENGTH AS OF JUNE 1980

** EXCLUDES THOSE IN PCS STATUS, STUDENTS, HOSPITALIZED PERSONNEL,
AND PERSONNEL WITH LESS THAN SIX WEEKS ON THE JOB

TABLE 3
COMMAND REPRESENTATION OF SURVEY SAMPLE
326X7B

<u>COMMAND</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>
TAC	60	63
USAFE	14	16
ATC	1	1
PACAF	15	15
OTHER	<u>10</u>	<u>5</u>
TOTAL	100	100

TOTAL B-SHRED ASSIGNED* - 231

TOTAL B-SHRED PERSONNEL ELIGIBLE FOR SURVEY** - 206

NUMBER OF RESPONDENTS INDICATING A B-SHRED DAFSC SUFFIX - 104

* ASSIGNED STRENGTH AS OF JUNE 1980

** EXCLUDES THOSE IN PCS STATUS, STUDENTS, HOSPITALIZED PERSONNEL,
AND PERSONNEL WITH LESS THAN SIX WEEKS ON THE JOB

TABLE 4
COMMAND REPRESENTATION OF SURVEY SAMPLE
326X7C

<u>COMMAND</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>
TAC	88	90
ATC	3	4
OTHER	<u>9</u>	<u>6</u>
TOTAL	100	100

TOTAL C-SHRED PERSONNEL ASSIGNED* - 95

TOTAL C-SHRED PERSONNEL ELIGIBLE FOR SURVEY** - 81

NUMBER OF RESPONDENTS INDICATING A C-SHRED DAFSC SUFFIX - 52

* ASSIGNED STRENGTH AS OF JUNE 1980

** EXCLUDES THOSE IN PCS STATUS, STUDENTS, HOSPITALIZED PERSONNEL,
AND PERSONNEL WITH LESS THAN SIX WEEKS ON THE JOB

TABLE 5
PAY GRADE DISTRIBUTION OF SURVEY SAMPLE
(TOTAL 326X7A/B/C SAMPLE)

<u>GRADE</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>
AIRMAN	33	24
E-4	31	37
E-5	21	24
E-6	10	11
E-7	<u>5</u>	<u>4</u>
TOTAL	100	100

TABLE 6
TAFMS DISTRIBUTION OF SURVEY SAMPLE
(TOTAL 326X7A/B/C SAMPLE)

<u>TAFMS (MONTHS)</u>	<u>PERCENT OF SAMPLE</u>
1-48	53
49-96	21
97-144	11
145+	15

SPECIALTY JOBS (Career Ladder Structure)

One of the most important functions of the USAF occupational analysis program is to identify the distinct jobs performed within a specialty and how these jobs relate to one another. The diversity of jobs is important to the USAF Personnel Classification System. If the jobs are too diverse or specialized, AFMPC may need to split the specialty into separate career ladders (or shredouts). If related specialties are similar enough (in terms of tasks, required skills, or related knowledges), AFMPC may merge them together to minimize assignment problems (such as CONUS/overseas imbalance), provide better career progression, or to minimize recruiting problems.

Job diversity within a specialty (or related group of specialties) is also very important information for the training community. Common resident training is most efficient when specialty jobs are similar (in terms of required skills and knowledges). If jobs are too diverse, technical school training may not be cost-effective and new personnel must learn through on-the-job training (OJT).

Additionally, job information is used to analyze career progression patterns, and specialty documents (AFR 39-1 Specialty Description, Special Training Standard, etc.) to identify needed changes. Job data are also used to review training programs, identify morale (job satisfaction) problems, to identify trends, and to highlight issues needing management attention.

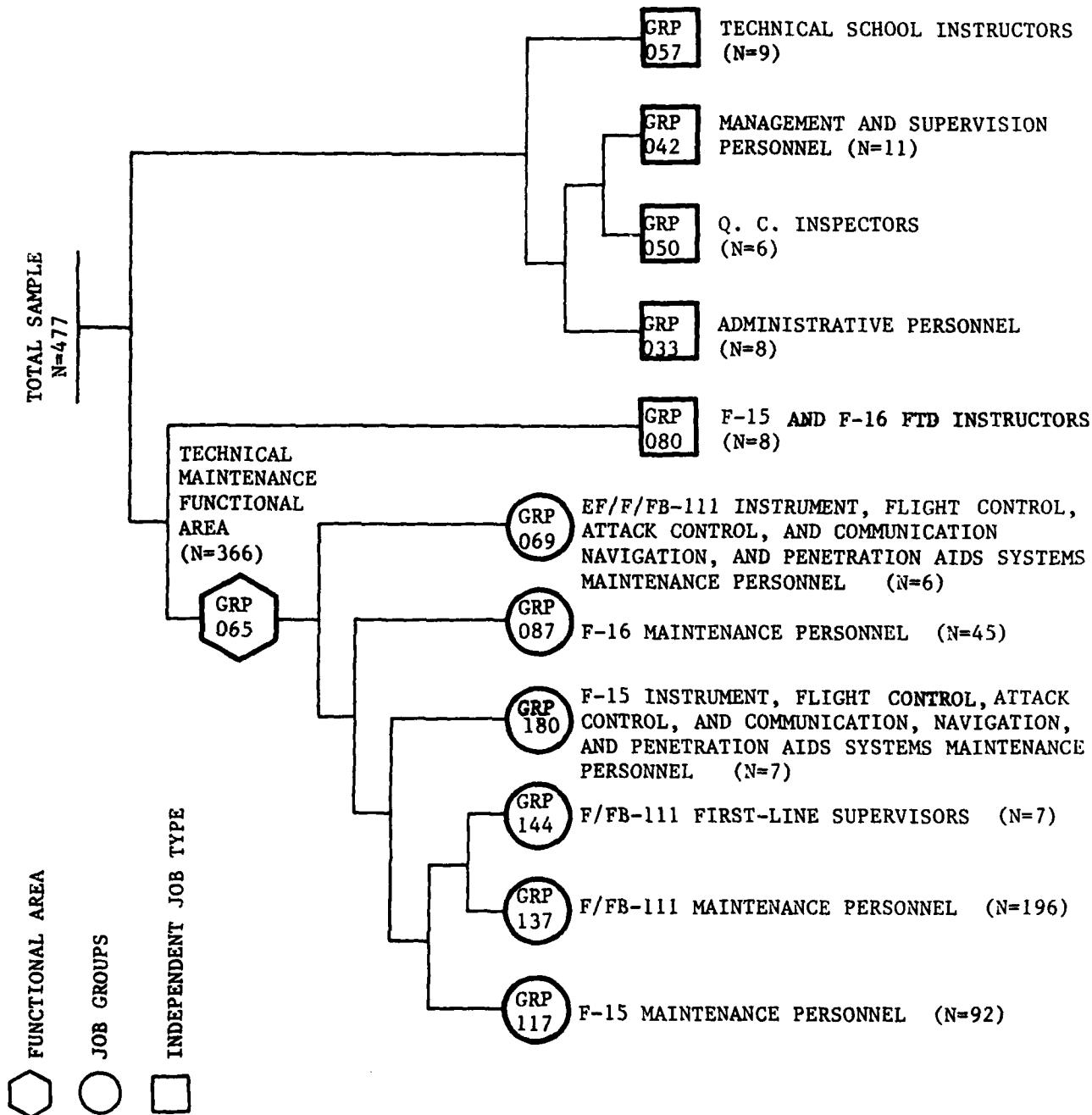
Within the Instrument and Flight Control Systems specialty, six technical job groups and five supervisory/managerial independent job types were identified. These are shown in Figure 1 and listed below.

TECHNICAL MAINTENANCE FUNCTIONAL AREA (GRP065, N=366)

- I. F-15 MAINTENANCE PERSONNEL (GRP117, N=92)
- II. F/FB-111 MAINTENANCE PERSONNEL (GRP137, N=196)
- III. F/FB-111 FIRST-LINE SUPERVISORS (GRP144, N=7)
- IV. F-15 INSTRUMENT, FLIGHT CONTROL, ATTACK CONTROL, AND COMMUNICATION (COMM), NAVIGATION (NAV), AND PENETRATION AIDS (PEN-AIDS) SYSTEMS MAINTENANCE PERSONNEL (GRP180, N=7)
- V. F-16 MAINTENANCE PERSONNEL (GRP087, N=45)
- VI. EF/F/FB-111 INSTRUMENT, FLIGHT CONTROL, ATTACK CONTROL, AND COMMUNICATION (COMM), NAVIGATION (NAV), AND PENETRATION AIDS (PEN-AIDS) SYSTEMS MAINTENANCE PERSONNEL (GRP069, N=6)

FIGURE 1

326X7X CAREER LADDER STRUCTURE



ADMINISTRATIVE, SUPERVISORY AND MANAGERIAL FUNCTIONAL AREA

- VII. F-15 AND F-16 FIELD TRAINING DETACHMENT (FTD) INSTRUCTORS (GRP080, N=8)
- VIII. ADMINISTRATIVE PERSONNEL (GRP033, N=8)
- IX. QUALITY CONTROL (QC) INSPECTORS (GRP050, N=6)
- X. MANAGEMENT AND SUPERVISION PERSONNEL (GRP042, N=11)
- XI. TECHNICAL SCHOOL INSTRUCTORS (GRP057, N=9)

The technical functional area combined with the independent job types comprised 86 percent of the total sample. The remaining 14 percent of the sample involved personnel performing jobs too dissimilar to be included in the jobs above.

Job Descriptions

A brief description of the technical maintenance functional area, along with the six job groups within it and the additional five independent job types, is given below. Representative tasks are listed in more detail in Appendix A. Tables 7 and 8 list pertinent information relating to the technical maintenance functional area and the independent job types, with Table 7 listing demographic background information, and Table 8 reflecting job satisfaction data.

TECHNICAL MAINTENANCE FUNCTIONAL AREA (GRP065). The 366 members in the technical maintenance functional area perform the technical maintenance aspect of the 326X7 Integrated Avionics Instrument and Flight Control Systems specialty. Testing the flight control systems in the aircraft, troubleshooting, and removing those systems constitutes the main emphasis of the technical jobs. There is high overlap in tasks performed across aircraft types; however, the aircraft-specific tasks did break the area into job groups according to these aircraft types. Ninety-one percent of the job time of members in this area is spent in the technical area of maintenance. Some common tasks performed in this functional area are:

- operate AGE
- perform operational checks of flight control computers
- perform leak checks of pitot-static systems
- perform operational checks of ADC or CADC systems
- isolate malfunctions to air data computers (ADC) or central air data computers (CADC)
- remove or install ADC or CADC system LRUs
- perform flight control manual trim checks
- remove or install fuel quantity indicating system components

The average time in service (TAFMS) for technical personnel is 60 months. As could be expected, 59 percent of these personnel are also in their first enlistment. In addition, 75 percent indicate having a 5-skill level

Duty Air Force Specialty Code (DAFSC). Members report performing a broad job in the career ladder, averaging 221 tasks performed. Seventy-four percent of the personnel in the area are in a production-oriented maintenance organization (POMO) and only 34 percent report supervising other personnel. Only 31 percent having assignments overseas. TAC and USAFE have the highest percentage of these technical workers, with 55 and 25 percent of the members respectively.

Some of the common test equipment used by personnel in this area includes DCM-216 wiring repair tool kits, and TTU-205 C/E pitot-static system testers. FOD and Phase inspections are both performed by a majority of the technical personnel.

Seventy-three percent of these personnel find their job interesting, 75 percent find their talents well utilized, and 82 percent feel their training is well utilized. However, only 45 percent of the technical personnel indicate intentions to reenlist.

Representative tasks for the technical maintenance functional area, as well as for the specific job groups within this area, are provided in Appendix A. For comparison to non-technical jobs, Tables 7 and 8 list the technical maintenance functional area as a group (labeled Technical Personnel), along with the independent job types.

Following are brief descriptions of the job groups identified in the technical maintenance functional area of the Integrated Avionics Instrument and Flight Control Systems specialty. Six job groups were identified within this area, most of which differentiated on the basis of aircraft type maintained. Tables 9 and 10 provide additional background and job satisfaction data for these job groups. Additionally, Tables A2 through A7 in Appendix A list the representative tasks for the job groups in the order of their discussion.

I. F-15 Maintenance Personnel (GRP117). The 92 members of this job group maintain the instrument and flight control systems on the F-15A, B, C, and D aircraft, spending 71 percent of their time in this area. An additional 13 percent of their time is spent maintaining integrated avionics attack control systems on the F-15, normally a 326X6 responsibility. On the average, these workers perform 183 tasks. Some examples of these tasks are:

- operate AGE
- operate automatic flightline test sets
- perform leak checks of pitot-static systems
- isolate malfunctions to air inlet controllers or spike controllers
- interpret aircraft interconnecting wiring diagrams
- perform operational checks of AHRS

Eighty-four percent of these incumbents hold a 5-skill level, with 64 percent in their first enlistment. This group has the largest percentage (20 percent) of the PACAF members of any group identified in the career ladder structure; however, most members (61 percent) are in TAC. Typical test equipment used by a majority of these individuals are:

automatic flightline test sets
electrical connector aircraft wiring repair tool kits (DCM-216)
fuel quantity gauging test boxes (68D310016)
proximity control switch test boxes
TTU-205 C/E pitot-static system testers

II. F/FB-111 Maintenance Personnel (GRP137). The 196 members in this group maintain the integrated avionics instrument and flight control systems on the F-111A, D, E, F, and FB-111A aircraft. Usually, members maintain only one of these models. Ninety percent of their job time is spent in this technical area. Members perform an average of 245 tasks. Examples of these tasks include:

isolate malfunctions to flight control computers
perform flight control computer self-tests
perform operational tests of flight control computers
perform operational checks of ADC or CADC systems
perform leak checks of pitot-static systems
perform flight control manual trim checks
isolate malfunctions to airspeed mach indicators

This group accounts for 41 percent of the total sample of 326X7 personnel. Thirty-three percent of the group indicate assignment overseas, with almost all of these members also reporting USAFE as their major command (MAJCOM). As is the case with the F-15 maintenance personnel, 64 percent of this group are in their first enlistment. Common test equipment utilized by more than half of all members of this group are:

electrical connector aircraft wiring repair tool kits (DCM-216)
fuel quantity cap test sets (TF-20 or GTF-6)
TTU-205 C/E pitot-static system testers

Other test equipment used by less than 50 but over 25 percent of the group are subsystem tie-in and capacitance test sets. Additionally, phase inspections are the only inspections performed by a majority of these personnel.

Some interesting subgroups were noted within this group of technical workers. One subgroup of seven has five members who report working on F-16 aircraft at Hill AFB; however, due to their similar task performance, they grouped with F-111 personnel. There is also a subgroup of F-111 FTD instructors within this group. Personal contact by telephone with some of these instructors revealed that their job was really less technical than indicated. These individuals reported performing tasks which in actuality are performed mainly for demonstration purposes.

III. F/FB-111 First-line Supervisors (GRP144). The seven personnel comprising this group are both technicians and supervisors. Sixty-two percent of their job time is directed in the areas of technical integrated avionics instrument and flight control systems maintenance. An additional 12 percent of their time is spent directing and implementing. Members report performing an average of 313 tasks, some of which are:

supervise AFSC 32657A personnel
direct maintenance or checkout of integrated avionics systems
supervise AFSC 32637A personnel
make entries on maintenance discrepancy and work document forms
operate AGE
isolate malfunctions to flight control panels
isolate malfunctions to flight control pedal shakers

With an average grade of E-6 and an average time in service (TAFMS) of 178 months, this is the most experienced job type identified. Eighty-six percent of the group report supervising other personnel. Additionally, the majority of the group have overseas assignments (57 percent) and are in USAFE. Only one member of this group completed the resident technical training in this career ladder; all other members converted or retrained to this specialty. Six of the seven members also hold 7-skill level DAFSCs.

Common test equipment used by more than three of these members are:

electrical connector aircraft wiring repair tool kits (DCM-216)
fuel quantity cap test sets (TF-20 or GTF-6)
TTU-205 C/E pitot-static system testers
subsystem tie-in test sets

No other job type has a majority of members using subsystem tie-in test sets, as does this group. FOD and phase inspections are commonly performed by these individuals.

IV. F-15 Instrument, Flight Control, Attack Control, and Communication (COMM), Navigation (NAV), and Penetration Aids (PEN-AIDS) Systems Maintenance Personnel (GRP180). The seven individuals in this job type perform a diverse job, maintaining a wide spectrum of integrated avionics systems. All members of the group are 326X7 Integrated Avionics Instrument and Flight Control Specialty personnel, but their job spreads across integrated avionics attack control systems (326X6) and communication, navigation, and penetration aids (326X8) maintenance. Ten percent of their job time is spent performing integrated avionics instrument and flight control systems, and 14 percent is spent maintaining integrated avionics COMM, NAV, and PEN-AIDS. Members of this group perform a large number of tasks, with a group average of 279. Some typical tasks are:

interpret aircraft interconnecting wiring diagrams
isolate malfunctions to air inlet controllers or spike controllers
operate automatic flightline test sets
operate pressure or temperature test sets
perform operational checks of attitude heading reference system (AHRS)
remove or install UHF system LRUs
remove or install central computers
position or remove aircraft chocks

Seventy-one percent of this group report supervising other personnel in addition to the technical nature of their job. All members of the group hold

either a 5- or 7-skill level DAFSC. Forty-three percent of the group have overseas assignments in USAFE. As an additional point of interest, 71 percent of this group converted from a previous 325XXX or 326XXX Air Force Specialty (AFS).

Seventy-one percent of this group work on F-15A and B model aircraft, while 29 percent of the group work on F-15C and D aircraft. Some of the test equipment used by these incumbents are:

- air-to-air ID test sets (UPM-349)
- air-to-ground IFF test sets
- flightline test sets
- electrical connector aircraft wiring repair tool kits (DCM-216)
- fuel quantity gauging test boxes (680310016)
- instrument landing system (ILS) test sets
- proximity control switch test boxes
- TTU-205 C/E pitot-static system testers

The amount of test equipment listed is a further indication of the broad nature of their job. Air-to-air ID test sets (UPM-349) are uniquely used by this job group as compared to other 326X7 job groups.

V. F-16 Maintenance Personnel (GRP087). The 45 members of this job group maintain the integrated avionics instrument and flight control systems of the F-16A and B aircraft. Eighty-five percent of their job time is spent performing technical duties. These personnel perform an average of 154 tasks. Examples of these tasks are:

- perform operational checks of flight control power supplies
- isolate malfunctions to flight control power supplies
- operate AGE
- perform operational checks of flight control computers
- isolate malfunctions to flight control computers
- perform operational checks of air data computer (ADC) or central air data computer (CADC) systems
- remove or install ADC or CADC systems

All members of this group are stationed in the Continental United States (CONUS) and nine percent are female. Also, 51 percent of these incumbents are in their first enlistment and 47 percent of the group report supervising other personnel. Almost all (91 percent) are in TAC. Additionally, 31 percent indicate converting from a 325XXX AFSC. Common equipment used by F-16 maintenance personnel are:

- *capacitance test sets (472914)
- *DC fuel quantity test sets (472844)
- electrical connector aircraft wiring repair tool kits (DCM-216)
- *fuel control quantity cap test sets (TF-20 or GTF-6)
- TTU-205 C/E pitot-static system testers

* Equipment marked with an asterisk is utilized by a majority of this group but not by a majority of any other 326X7 job group identified.

FOD, aircraft acceptance, and phase inspections are all performed by a majority of these personnel.

VI. EF/F/FB-111 Instrument, Flight Control, and Attack Control, and Communication (COMM), Navigation (NAV), and Penetration Aids (PEN-AIDS) Systems Maintenance Personnel (GRP069). Comprised of six individuals, this group performs a combination of 326X6A, 326X7A, and 326X8A tasks. Eighteen percent of their job time is spent maintaining attack control systems (326X6A duties), 44 percent is spent maintaining instrument and flight control systems (326X7A duties), and 16 percent is spent maintaining communication, navigation, and penetration aids systems (326X8A duties). They have the broadest job identified in the career ladder structure, with members performing an average of 378 tasks. Typical tasks include:

- interpret aircraft interconnecting wiring diagrams
- remove or install angle-of-attack (AOA) transmitters
- isolate malfunctions to AOA transmitters
- perform operational checks to stall inhibitor systems (SIS)
- perform operational checks of intercommunication systems
- perform operational checks of UHF systems
- isolate malfunctions to ARS antenna control units
- isolate malfunctions to ARS antenna pedestals

With the majority of their time spent in the area of instrument and flight control maintenance, the attack control, comm, nav, and pen-aids systems maintenance performed tends to be an additional, rather than a primary, responsibility of these personnel.

Four of these six incumbents are located at McClellan AFB CA and assigned to the Air Force Logistics Command (AFLC). Seventeen percent of the group are female and no member has an assignment overseas. Eighty-three percent of these incumbents hold 5-skill level DAFSCs. This is the only group with a significant portion of the members maintaining EF-111A aircraft, with half of the group reporting this responsibility. Typical test equipment used are:

- air-to-ground IFF test sets
- *beacon transponder test sets
- fuel quantity cap test sets (TF-20 or GTF-6)
- instrument landing system (ILS) test sets
- *pressurization test sets
- TTU-205 C/E pitot-static system testers
- *TACAN test sets

* Equipment marked with an asterisk is utilized by a majority of this group but not by a majority of any other 326X7 job group identified.

Common inspections performed by these personnel are FOD, aircraft acceptance, and preflight inspections.

VII. F-15/F-16 Field Training Detachment (FTD) Instructors (GRP080). Seven of the eight members of this group report a job title of FTD instructor. These individuals train incoming prospective 32637B and 32637C personnel. Upon completion of training, students are awarded their AFSC. These instructors perform only limited technical duties, with the largest portion of their job time spent in the area of training. Most technical tasks performed are done as demonstrations for the students. On the average, the FTD instructors report performing 81 tasks. Some typical tasks include:

- conduct formal classroom instruction
- evaluate progress of students
- demonstrate operation of equipment
- prepare lesson plans
- conduct FTD training
- administer or score tests

All members of this group report a 7-skill level DAFSC and are in Air Training Command (ATC). The average grade for the group is E-6. With an average time in service (TAFMS) of 171 months, these personnel are the most experienced group identified.

VIII. Administrative Personnel (GRP033). Comprised of eight members, these personnel perform an almost exclusively administrative job, with only two percent of the group's job time spent in technical areas. Maintaining forms, records, and reports consumes 41 percent of their job time. They report a fairly limited job, with members performing an average of only 21 tasks. Typical tasks are:

- make entries on significant historical data forms
- develop records or maintenance and disposition files
- analyze causes of occupational discrepancies
- update maintenance data records
- coordinate work with other sections

This was a very diverse group, with only seven tasks performed in common by over 50 percent of the group members. This is understandable since the group consists of individuals reporting job titles such as aircraft historian, aircraft analyst, and debriefer--the common element in these jobs being their administrative nature.

Fifty percent of this group report supervising other personnel and 50 percent report being in their first enlistment. One-half of the group also indicates an A-shred; however, some individuals obviously should have indicated a shred but did not, since 63 percent of the group report a 5-skill level DAFSC. Fifty percent of this group are also located overseas.

IX. Quality Control (QC) Inspectors (GRP050). Five of the six members of this group report a job title of Quality Control Inspector. Evaluating compliance with standards, performing inspections to ensure proper standards and capabilities, and completing forms and reports are the main emphases in this job. Individuals in this group spent 40 percent of their relative job time

inspecting and evaluating; 21 percent maintaining forms, records, and reports; and only 14 percent of their time in technical areas. Members perform an average of 63 tasks. Examples of tasks they perform include:

- evaluate compliance with performance standards
- make entries on quality control inspection summary forms
- evaluate inspection reports or procedures
- review T0s
- perform safety inspections
- evaluate maintenance capabilities of sections

Sixty-seven percent of the members of this group hold a 7-skill level DAFSC. Seventeen percent of the group are located overseas, with all members of the group being male. Sixty-seven percent of this group are in TAC and indicate assignment to a POMO. Only 33 percent indicate supervising other personnel.

X. Management And Supervision Personnel (GRP042). The 11 individuals comprising this group spend their time doing organizational management and supervising other personnel. Only 13 percent of their job time is spent performing technical maintenance work. On the average, these personnel report performing 26 tasks. Typical tasks include:

- direct maintenance or checkout of integrated avionic systems
- coordinate work with other sections
- determine work priorities
- plan work assignments
- prepare airman performance reports (APR)
- endorse APRs
- counsel personnel on personal or military related problems

The average time in service (TAFMS) for this group is the second highest of all groups identified. In addition, their average time in the career field (TICF) of 102 months makes them the most experienced personnel of any group. Seventy-three percent of these individuals indicate supervising other personnel. Only one member of this group is located overseas and 55 percent of this group are under POMO.

XI. Technical School Instructors (GRP057). Seventy-eight percent of the nine members of this group report a job title of Resident Course Instructor. One of the other two members reports being a Resident Course Instructor Supervisor, and the other member is an FTD Instructor. The resident course instructors in this group teach the basic integrated avionics principles to incoming students prior to their enrollment in the AFSC-awarding 326X7 FTD courses. The members of this group performed an average of only 11 tasks. Some of these tasks are:

- conduct formal classroom instruction
- prepare lesson plans
- administer or score tests
- evaluate progress of students
- develop training aids
- demonstrate operation of equipment

All members of this group are in ATC and 22 percent of the group are female. Eight of these instructors are assigned to Lowry AFB CO. Additionally, 56 percent of the instructors have a 7-skill level DAFSC, with the rest having a 5-skill level. Of the 56 percent indicating shreds (one 7-skill level incorrectly reported a shred), all are in the A-shred. Only one member of the group reports supervising other personnel.

Comparison of Specialty Jobs

The technical jobs performed by 326X7 personnel have a lot of commonality. Even with this homogeneity, there are enough differences between maintenance of instrument and flight control systems on F-15, F-16, and F/FB-111 aircraft to justify the present 3-shred structure.

As can be seen in Table 7, the technical jobs identified combined to form 77 percent of the sample, with the non-technical jobs identified comprising only nine percent. Within the technical area, maintenance of F/FB-111 instrument and flight control systems forms the largest job identified (see Table 7). In line with expectations, technical personnel have a lower average grade and lower average time in service (TAFMS) than the non-technical incumbents. Within the technical personnel, F/FB-111 first-line supervisors have a noticeably higher average grade and time in service.

The technical personnel found their job much more interesting, on the average, than the non-technical groups (see Table 8). Reenlistment intentions, however, follow expectations, with the less-experienced technical group having a higher percentage planning not to reenlist. Fewer of the administrative personnel are satisfied with the utilization of their training.

Within the technical personnel groups, the F-15 instrument, flight control, attack control, and communication, navigation, and pen-aids systems personnel find their job the least interesting (see Table 10). The other multifunctional group--maintaining EF/F/FB-111 systems (N=6)--reports high job interest and both groups perceive at least fair utilization of their talents and training. F-15 maintenance personnel report the lowest reenlistment intentions.

TABLE 7
BACKGROUND INFORMATION FOR FUNCTIONAL AREA AND INDEPENDENT JOB TYPES

	F-15/F-16 FTD INSTRUCTORS (GRP080)	ADMINISTRATIVE PERSONNEL (GRP033)	QUALITY CONTROL INSPECTORS (GRP050)	MANAGEMENT AND SUPERVISION PERSONNEL (GRP042)	TECHNICAL SCHOOL INSTRUCTORS (GRP057)
NUMBER IN GROUP	366	8	8	6	11
PERCENT OF SAMPLE	77%	2%	2%	1%	2%
PERCENT LOCATED OVERSEAS	31%	13	50%	17%	11%
DAFSC DISTRIBUTION					
32637	7%	0%	0%	0%	0%
32657	75%	0%	63%	33%	44%
32677	18%	100%	37%	67%	56%
NUMBER IN EACH SHRED					
A-SHRED (F/FB-111)	43%	0%	50%	16%	0%
B-SHRED (F-15)	22%	0%	0%	0%	0%
C-SHRED (F-16)	11%	25%	0%	17%	0%
NO SHRED INDICATED	24%	75%	50%	67%	44%
AVERAGE GRADE	4.1	6.0	4.8	5.5	5.2
AVERAGE TIME IN SERVICE (MONTHS TAFMS)	60	171	98	123	107
AVERAGE TIME IN CAREER FIELD (MONTHS)	43	62	72	71	69
PERCENT IN FIRST ENLISTMENT	59%	0%	50%	0%	11%
PERCENT SUPERVISING	34%	13%	50%	33%	11%
AVERAGE NUMBER OF TASKS PERFORMED	221	81	21	63	126
PERCENT IN POMO ORGANIZATION	74%	25%	75%	67%	55%
PERCENT MEMBERS FEMALE	9%	0%	25%	0%	9%

TABLE 8
JOB SATISFACTION INDICES FOR TECHNICAL PERSONNEL FUNCTIONAL AREA AND INDEPENDENT JOB TYPE
(PERCENT MEMBERS RESPONDING)

	TECHNICAL PERSONNEL (N=366)	F-15/F-16 FTD INSTRUCTORS (N=8)	ADMINISTRATIVE PERSONNEL (N=8)	QUALITY CONTROL INSPECTORS (N=6)	MANAGEMENT AND SUPERVISION PERSONNEL (N=11)	TECHNICAL SCHOOL INSTRUCTORS (N=9)
<u>I FIND MY JOB:</u>						
DULL	12%	13%	38%	0%	27%	0%
SO-SO	14%	25%	0%	0%	9%	11%
INTERESTING	73%	62%	62%	100%	64%	89%
<u>MY JOB UTILIZES MY TALENTS:</u>						
NOT AT ALL TO VERY LITTLE	24%	25%	38%	0%	27%	0%
FAIRLY WELL OR BETTER	75%	75%	62%	100%	73%	100%
<u>MY JOB UTILIZES MY TRAINING:</u>						
NOT AT ALL TO VERY LITTLE	17%	13%	62%	0%	46%	11%
FAIRLY WELL OR BETTER	82%	87%	38%	100%	54%	89%
<u>REENLISTMENT INTENTIONS:</u>						
WILL RETIRE	2%	38%	13%	0%	9%	0%
PLAN NOT TO REENLIST	52%	12%	38%	17%	36%	22%
PLAN TO REENLIST	45%	50%	50%	83%	55%	78%

NOTE: COLUMNS MAY NOT ADD UP TO 100% DUE TO "NO RESPONSE"

TABLE 9
BACKGROUND INFORMATION FOR JOB GROUPS IN THE TECHNICAL PERSONNEL FUNCTIONAL AREA

	F-15 MAINTENANCE PERSONNEL (GRP117)	F/FB-111 MAINTENANCE PERSONNEL (GRP137)	F/FB-111 FIRST-LINE PERSONNEL (GRP144)	F-15 INST., F/T, ATTACK CONTROL, AND COMM., NAV., AND PEN-AIDS SYSTEMS MAINTENANCE PERSONNEL (GRP180)	F-16 MAINTENANCE PERSONNEL (GRP087)	FF/F/FB-111 INST., F/T, ATT. CONTROL, AND COMM., NAV., & PEN-AIDS SYSTEMS MAINTENANCE PERSONNEL (GRP069)
NUMBER IN GROUP	92	196	7	7	45	6
PERCENT OF SAMPLE	19%	41%	1%	1%	9%	1%
PERCENT LOCATED OVERSEAS	37%	33%	57%	43%	0%	0%
DAFSC DISTRIBUTION						
32637	3%	9%	0%	0%	11%	0%
32657	84%	76%	14%	57%	69%	83%
32677	13%	15%	86%	43%	20%	17%
NUMBER IN EACH SHRED						
A-SHRED (FF/F/FB-111)	0%	75%	14%	0%	0%	0%
B-SHRED (F-15)	72%	3%	0%	71%	4%	17%
C-SHRED (F-16)	0%	3%	0%	0%	76%	0%
NO SHRED INDICATED	28%	19%	85%	29%	20%	33%
AVERAGE GRADE	4.0	4.0	6.1	4.9	4.0	4.7
AVERAGE TIME IN SERVICE (MONTHS TAMS)	53	56	178	88	59	90
AVERAGE TIME IN CAREER FIELD (MONTHS)	32	47	131	51	31	68
PERCENT IN FIRST ENLISTMENT	64%	64%	14%	14%	51%	0%
PERCENT SUPERVISING	31%	30%	86%	71%	47%	50%
AVERAGE NUMBER OF TASKS PERFORMED	183	245	313	279	154	378
PERCENT IN POMO ORGANIZATION	97%	61%	57%	86%	91%	50%
PERCENT MEMBERS FEMALE	13%	8%	0%	0%	9%	17%

TABLE 10
JOB SATISFACTION INDICES FOR JOB GROUPS IN THE TECHNICAL PERSONNEL FUNCTIONAL AREA

F-15 MAINTENANCE PERSONNEL (N=92)	F/FB-111 MAINTENANCE PERSONNEL (N=196)	F/FB-111 FIRST-LINE SUPERVISORS (N=7)	F-15 INST., FLT. ATTACK CONTROL, AND COMM., NAV., AND PEN-AIDS SYSTEMS MAINTENANCE PERSONNEL (N=7)	F-16 MAINTENANCE PERSONNEL (N=45)	E/F/FB-111 INST., FLT., ATT CONTROL, AND COMM., NAV., & PEN-AIDS SYSTEMS MAINTENANCE PERSONNEL (N=6)
<u>EXPRESSED JOB INTEREST:</u>					
DULL	12%	10%	14%	29%	13%
SO-SO	15%	14%	14%	0%	0%
INTERESTING	71%	75%	72%	57%	100%
NOT REPORTED	2%	1%	0%	14%	0%
<u>PERCEIVED UTILIZATION OF TALENTS:</u>					
LITTLE OR NOT AT ALL	29%	22%	14%	14%	17%
FAIRLY WELL OR BETTER	70%	77%	86%	72%	83%
NOT REPORTED	1%	1%	0%	14%	0%
<u>PERCEIVED UTILIZATION OF TRAINING:</u>					
LITTLE OR NOT AT ALL	28%	13%	0%	14%	20%
FAIRLY WELL OR BETTER	71%	87%	100%	72%	80%
NOT REPORTED	1%	0%	0%	14%	0%
<u>REENLISTMENT INTENTIONS:</u>					
PLAN TO RETIRE	2%	2%	29%	0%	17%
PLAN NOT TO REENLIST	59%	55%	0%	43%	35%
PLAN TO REENLIST	38%	43%	57%	43%	64%
NOT REPORTED	1%	0%	14%	14%	0%

ANALYSIS OF DAFSC GROUPS

Along with identifying the job structure of the 326X7 specialty, it is also important to examine differences among survey respondents with respect to their skill level progression. The DAFSC analysis allows for identification of similarities and differences among the skill levels within each shred as well as across shreds. This information is also useful in evaluating how well career ladder documents, such as AFR 39-1 Specialty Descriptions and the Specialty Training Standards (STS), reflect the tasks and jobs specialty members perform in the field.

As mentioned in the INTRODUCTION, the 326X7 career ladder is shredded through the 5-skill level according to aircraft maintained. DAFSC 32637 and 32657 personnel with an A-shredout maintain F/FB-111 aircraft; those with a B-shredout maintain F-15 aircraft; and those with a C-shredout maintain F-16 aircraft. Seven-skill level personnel are assigned to any aircraft system and do not carry a suffix.

As is typical in many career ladders, incumbents upgrade from the 3-skill level to the 5-skill level within the first year of their entry into the 326X7 career ladder. Consequently, the job performed by both 3- and 5-skill level incumbents is very similar and the 3- and 5-skill levels are discussed as one group for all shreds.

DAFSC 32637A and 32657A

These 180 personnel perform flightline maintenance on the integrated avionics instrument and flight control systems of F/FB-111 aircraft. The models most widely maintained are the F-111A, F-111D, F-111E, F-111F, and FB-111A aircraft; only two percent of these personnel report the maintenance of EF-111A aircraft. Most A-shred incumbents are found in the F/FB-111 Maintenance Personnel job group discussed in the SPECIALTY JOBS section. Along with being the largest of the three shreds, these personnel have the broadest job, with members performing an average of 211 tasks.

As can be seen in Table 11, this shred has the most unique job; there are more aircraft specific tasks performed in this shred than in the other two. Auxiliary flight reference systems (AFRS) and stall inhibitor systems (SIS) are typical of the systems almost exclusive to A-shred incumbents. The types of tasks performed by the other two shreds but not as much by the A-shred workers tend to deal with avionics status panels. Additionally, Table 12 reveals that A-shred personnel use fuel quantity cap test sets (TF-20 or GTF-6) and subsystem tie-in test sets more than personnel in the other shreds.

DAFSC 32637B and 32657B

The 94 members of this group perform the flightline maintenance of the integrated avionics instrument and flight control systems on the F-15 aircraft. They perform an average of 162 tasks and maintain F-15A and B aircraft to the greatest extent; F-15C and D models are also maintained by fewer, but still a substantial number of incumbents.

Proximity switch control boxes and attitude heading reference systems are maintained by more B-shred than A- or C-shred personnel, as indicated in Table 11; not as many B-shred personnel maintain angle of attack (AOA) equipment and flight control test panels as do members with the other two shreds. Also, automatic flightline test sets, fuel quantity guaging test boxes (68D310016), and proximity control switch test boxes are the test equipment utilized by more B-shred incumbents.

DAFSC 32637C and 32657C

With 43 members, this is the smallest shred in the career ladder. Personnel in this group perform the flightline maintenance of the integrated avionics instrument and flight control systems on the F-16A and B aircraft. On the average, members perform 153 tasks.

Systems such as flight control power supplies are maintained more by C-shred personnel; however, as can be seen in Table 11, many of the differentiating F-16 tasks are performed by a number of A- and B-shred incumbents as well. Equipment maintained more by A- and B-shred, but not C-shred incumbents, included auxiliary flight reference systems (AFRS), attitude heading reference systems, and flight director computers (FDC) or flight director adapters (FDA). The test equipment utilized more by C- than A- or B-shred personnel included capacitance test sets (472914), DC fuel quantity test sets (472844), flight control self-test testor/word readers (16V14521-1), inclinometers (TB100), and wheel spin-up test fixtures.

DAFSC 32637X and 32657X (All Shreds)

A combination group of all 3- and 5-skill level personnel in all shreds is examined to illustrate those common tasks performed across shreds. Also, the general pattern of career ladder advancement with skill level becomes apparent when the combined 3- and 5-skill level group is compared to the 7-skill level group.

The common job performed by 3- and 5-skill level personnel across shreds consists mainly of common maintenance and administrative tasks. Table 13 presents a listing of the representative tasks of the combined group. Some of the common systems include pitot-static systems, air data computer or central air data computer (CADC) systems, flight control computers, and angle of attack (AOA) transmitters.

As can be seen from the large number of tasks with a high percentage of this group reporting their performance, a major portion of the 3- and 5-skill level job is common across shreds. This is supported by the high overlap in the career ladder structure as well. Overall, the technical flightline maintenance job is distinguished among shreds only by a number of aircraft-specific tasks; otherwise, the jobs are very similar.

Common test equipment used by members of this group can be derived from Table 12. TTU-205 C/E pitot-static system testers and electrical connector aircraft wiring repair tool kits (DCM-216) are the only identified equipment used by a large percentage of all the shred groups.

DAFSC 32677

Consisting of 117 members, this group performs technical flightline maintenance as well as supervisory and managerial functions. Forty-five percent of their time is spent in non-technical areas. A list of representative tasks performed by 32677 incumbents is presented in Table 14; some of these are:

- interpret aircraft interconnecting wiring diagrams
- prepare APRs
- make entries on maintenance data collection forms
- perform leak checks of pitot-static systems
- demonstrate operation of equipment

Seventy percent of the DAFSC 32677 personnel indicate maintaining aircraft systems, while 30 percent did not. Career ladder structure analysis revealed that 44 percent of the 7-skill level incumbents are in a non-technical job such as quality control, administrative work, supervision, or instructing. The other 56 percent of the 7-skill level personnel grouped with the personnel doing technical flightline maintenance. Consequently, the 7-skill level personnel were a split group, with incumbents tending to perform either a totally administrative-managerial job or a combination of flightline maintenance with supervision and management.

As evidenced in Table 15, which illustrates the tasks best differentiating 3- and 5- from 7-skill level incumbents, advancement in skill level generally includes an increase in supervisory and managerial responsibilities. This is a trend which is common across most Air Force specialties.

Summary

Personnel in the 326X7 career ladder having a 3- or 5-skill level DAFSC perform a similar job. The differences in the job performed across shreds are not extreme and tend to be due to aircraft-specific tasks. With advancement in the career ladder, personnel gain their 7-skill level and begin performing more managerial and supervisory functions. In some positions, personnel with 7-skill levels may do very little technical flightline maintenance.

TABLE 11

EXAMPLES OF TASKS WHICH BEST DIFFERENTIATE 3- AND 5-SKILL LEVEL A, B, AND C SHRED PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASK	A SHRED PERSONNEL	B SHRED PERSONNEL	C SHRED PERSONNEL
R524 PERFORM OPERATIONAL CHECKS OF AUXILIARY FLIGHT REFERENCE SYSTEMS ATTITUDE OR HEADING SYSTEMS	84	18	5
R509 ISOLATE MALFUNCTIONS TO AUXILIARY FLIGHT REFERENCE SYSTEMS	80	13	2
S539 ISOLATE MALFUNCTIONS TO ENGINE PRESSURE RATIO TRANSMITTERS	82	13	12
P442 PERFORM FLIGHT CONTROL AUTOPILOT DAMPER PANEL CHECKS	84	18	19
P461 PERFORM OPERATIONAL CHECKS TO STALL INHIBITOR SYSTEMS (SIS)	77	10	7
S562 PERFORM OPERATIONAL CHECKS OF ENGINE PRESSURE RATIO INDICATING SYSTEMS	82	14	12
P435 ISOLATE MALFUNCTIONS TO AIRSPEED MACH AMPLIFIERS	83	20	7
Q474 ISOLATE MALFUNCTIONS TO SIS	78	12	12
P445 PERFORM FLIGHT CONTROL CONSTANT TRACK OR HEADING NAVIGATION CHECKS	82	10	12
S578 REMOVE OR INSTALL ENGINE PRESSURE RATIO TRANSMITTERS	77	5	0
P443 PERFORM FLIGHT CONTROL AUTOPILOT QUICK CHECKS	86	49	51
S574 REMOVE OR INSTALL AIR INLET CONTROLLERS	12	73	0
F198 OPERATE PROXIMITY SWITCH CONTROL BOXES	6	76	9
S535 ISOLATE MALFUNCTIONS TO AIR INLET CONTROLLERS OR SPIKE CONTROLLERS	57	72	0
R525 PERFORM OPERATIONAL CHECKS OF ALTITUDE AND HEADING REFERENCE SYSTEM (AIRS)	22	74	2
R511 ISOLATE MALFUNCTIONS TO AIRS DISPLACEMENT GYROSCOPES	57	77	9
Q493 PERFORM OPERATIONAL CHECKS OF BIT CONTROL PANELS	21	77	26
Q478 ISOLATE MALFUNCTIONS TO BIT CONTROL PANELS	19	76	26
Q503 REMOVE OR INSTALL BIT CONTROL PANELS	21	73	26
P422 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL POWER SUPPLIES	52	38	88
P460 PERFORM OPERATIONAL CHECKS OF FLIGHT CONTROL POWER SUPPLIES	49	34	84
F220 REMOVE OR INSTALL INSTRUMENT GLARE SHIELDS	8	22	81
P420 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL PNEUMATIC SENSOR ASSEMBLIES	38	34	88
P424 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL SIDE-SLIP DIFFERENTIAL PRESSURE SENSORS	38	19	88
P421 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL PNEUMATIC SENSOR ASSEMBLY MANIFOLDS	23	16	79

TABLE 12

TEST EQUIPMENT USED AND AVIONICS SYSTEMS INSPECTIONS PERFORMED BY DAFSC GROUPS
(PERCENT MEMBERS USING OR PERFORMING)*

TEST EQUIPMENT USED	SKILL LEVEL PERSONNEL			SKILL LEVEL PERSONNEL (N=117)
	A SHRED (N=180)	B SHRED (N=94)	C SHRED (N=43)	
AUTOMATIC FLIGHTLINE TEST SETS	13	69	14	28
CAPACITANCE TEST SETS (472914)	31	17	81	29
DC FUEL QUANTITY TEST SETS (472844)	13	23	88	23
ELECTRICAL CONNECTOR AIRCRAFT WIRING REPAIR TOOL KITS (DCM-216)	57	70	63	52
FLIGHT CONTROL SELF-TEST TESTOR/WORD READERS (16U14521-1)	4	12	93	15
FUEL QUANTITY CAP TEST SETS (TF-20 OR GTF-6)	85	32	67	45
FUEL QUANTITY GAUGING TEST BOXES (68D310016)	3	68	42	21
INCLINOMETERS	13	3	35	19
PRESSURIZATION TEST SETS	8	19	16	5
PROXIMITY CONTROL SWITCH TEST BOXES	2	73	2	18
TTU-205 C/E PITOT-STATIC SYSTEM TESTERS	88	83	91	74
SUBSYSTEM TIE-IN TEST SETS	18	3	0	23
WHEEL SPIN-UP TEST FIXTURES	1	0	44	12
NONE	11	13	7	24
<hr/>				
INSPECTIONS PERFORMED				
FOD INSPECTIONS	31	64	54	48
AIRCRAFT ACCEPTANCE INSPECTIONS	6	37	56	26
PHASE INSPECTIONS	52	76	65	45
780 INSPECTIONS	18	9	21	18
NONE	27	16	12	31

*ONLY EQUIPMENT USED AND INSPECTIONS PERFORMED BY OVER 10 PERCENT OF ANY OF THE LISTED GROUPS WERE INCLUDED IN TABLE

TABLE 13
GENERAL TASKS PERFORMED BY DAFSC 32637 AND 32657 PERSONNEL

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING (N=360)</u>
Q488 PERFORM LEAK CHECKS OF PITOT-STATIC SYSTEMS	84
Q489 PERFORM OPERATIONAL CHECKS OF ADC OR CADC SYSTEMS	84
Q470 ISOLATE MALFUNCTIONS TO AIR DATA COMPUTERS (ADC) OR CENTRAL AIR DATA COMPUTERS (CADC)	84
Q494 PERFORM OPERATIONAL CHECKS OF PITOT-STATIC PROBE HEATERS	84
F191 OPERATE AGE, SUCH AS POWER UNITS, HEATERS, COOLING UNITS OR LIGHT CARTS	83
P411 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL COMPUTERS	83
P457 PERFORM OPERATIONAL CHECKS OF FLIGHT CONTROL COMPUTERS	83
F187 INTERPRET AIRCRAFT INTERCONNECTING WIRING DIAGRAMS	83
F211 REMOVE OR INSTALL AVIONIC SYSTEMS MINOR HARDWARE SUCH AS SCREWS OR CONTROL KNOBS	83
T597 ISOLATE MALFUNCTIONS TO AOA TRANSMITTERS	83
Q479 ISOLATE MALFUNCTIONS TO PITOT-STATIC PROBES	83
Q480 ISOLATE MALFUNCTIONS TO PITOT-STATUC SYSTEM TUBING	83
P430 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL TRIM SYSTEMS	82
T614 PERFORM OPERATIONAL CHECKS OF AOA INDICATORS	82
P446 PERFORM FLIGHT CONTROL MANUAL TRIM CHECKS	81
Q499 REMOVE OR INSTALL ADC OR CADC SYSTEM LRUs	81
S581 REMOVE OR INSTALL FUEL QUANTITY INDICATING SYSTEM COMPONENTS	81
T615 PERFORM OPERATIONAL CHECKS OF AOA TRANSMITTERS	81
Q475 ISOLATE MALFUNCTIONS TO AIRSPEED MACH INDICATORS	81
T628 REMOVE OR INSTALL AOA TRANSMITTERS	81

TABLE 14
REPRESENTATIVE TASKS PERFORMED BY DAFSC 32677 PERSONNEL

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING (N=117)</u>
F187 INTERPRET AIRCRAFT INTERCONNECTING WIRING DIAGRAMS	76
E151 MAKE ENTRIES ON MAINTENANCE DISCREPANCY AND WORK DOCUMENT (AFTO FORM 781A)	71
F191 OPERATE AGE, SUCH AS POWER UNITS, HEATERS, COOLING UNITS, OR LIGHT CARTS	69
C96 PREPARE APRs	68
C97 PROVIDE TECHNICAL ASSISTANCE FOR JOB RELATED PROBLEMS ENCOUNTERED BY SUBORDINATES	67
E149 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD (AFTO FORM 349)	67
Q488 PERFORM LEAK CHECKS OF PITOT-STATIC SYSTEMS	67
D113 DEMONSTRATE OPERATION OF EQUIPMENT	65
D112 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	64
B29 COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED PROBLEMS	64
E164 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG (AFTO FORM 350)	64
Q489 PERFORM OPERATIONAL CHECKS OF ADC OR CADC SYSTEMS	64
E156 MAKE ENTRIES ON ON-THE-JOB TRAINING RECORD (AF FORM 623)	62
E146 MAKE ENTRIES ON JOB PROFICIENCY GUIDE CONTINUATION SHEET (AF FORM 797)	62
Q486 OPERATE PRESSURE OR TEMPERATURE TEST SETS	62

TABLE 15
EXAMPLES OF TASKS WHICH BEST DIFFERENTIATE 32637 AND 32657 FROM 32677 PERSONNEL

<u>TASKS</u>	<u>3- & 5- SKILL LEVEL PERSONNEL (N=360)</u>	<u>7-SKILL LEVEL PERSONNEL (N=117)</u>	<u>DIFFERENCE</u>
T625 REMOVE OR INSTALL ACCELEROMETER INDICATORS	68	34	34
P412 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL DAMPER SERVO ACTUATORS	67	36	31
S565 PERFORM OPERATIONAL CHECKS OF FUEL FLOW INDICATOR SYSTEMS	67	37	30
S580 REMOVE OR INSTALL FUEL FLOW INDICATORS	80	50	30
Q502 REMOVE OR INSTALL AVIONICS STATUS PANELS	51	21	30
T626 REMOVE OR INSTALL ACCELEROMETER TRANSMITTERS	64	35	29
T594 ISOLATE MALFUNCTIONS TO ACCELEROMETER INDICATORS	66	38	28
P437 OPERATE INTEGRATED AVIONIC SYSTEMS FOR AUTOMATIC FLIGHT CONTROL SYSTEMS TIE-IN TROUBLESHOOTING	69	41	28
R531 REMOVE OR INSTALL HSIs	78	50	28
S579 REMOVE OR INSTALL FAN OR TURBINE INLET TEMPERATURE INDICATORS	70	43	27
D112 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	38	64	-26
D113 DEMONSTRATE OPERATION OF EQUIPMENT	39	65	-26
E156 MAKE ENTRIES ON ON-THE-JOB TRAINING RECORD (AF FORM 623)	36	62	-26
E155 MAKE ENTRIES ON ON-THE-JOB TRAINING RECORD CONTINUATION SHEET (AF FORM 623A)	30	62	-32
A3 COORDINATE WORK WITH OTHER SECTIONS	22	54	-32
C97 PROVIDE TECHNICAL ASSISTANCE FOR JOB RELATED PROBLEMS ENCOUNTERED BY SUBORDINATES	31	67	-36
D111 COUNSEL INDIVIDUALS ON TRAINING PROGRESS	18	60	-42
B29 COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED PROBLEMS	21	64	-43
E146 MAKE ENTRIES ON JOB PROFICIENCY GUIDE CONTINUATION SHEET (AF FORM 797)	19	62	-43
C96 PREPARE APRs	22	68	-46

COMPARISON OF SURVEY DATA TO AFR 39-1 SPECIALTY DESCRIPTIONS

To ensure accuracy and to possibly update the 326X7 AFR 39-1 Specialty Descriptions, occupational survey data were compared to the March 1979 descriptions for DAFSCs 32637/57 and 32677. These documents were found to be accurate representations of the general jobs performed by 32637/57/77, personnel. The tasks listed in the descriptions covered the tasks performed by these individuals across aircraft types. Specific tasks performed by incumbents on certain aircraft types were not covered. To cover those tasks, AFR 39-1 Specialty Descriptions would have to be written for each of the three shreds. However, as a general job description for the overall 326X7 career ladder skill levels, the documents are supported by occupational survey data.

TRAINING ANALYSIS

Occupational survey data provide a broad look at the jobs performed within the career ladder. Many times, this can be very helpful in examining the training being provided to career ladder incumbents. The factors provided in occupational surveys which are most helpful in analyzing training are: percent of first-enlistment members performing tasks, utilization of equipment by first-enlistment personnel, task difficulty ratings of tasks, and training emphasis ratings of tasks. Since task difficulty and training emphasis ratings are not available in this study, only the first two factors can be used in examining 326X7 training. Training officials are forwarded a copy of a complete computer listing of the percent members performing the inventory tasks, along with the STS matchings. Figure 2 provides an illustration of the jobs performed by first-enlistment personnel in the 326X7 career ladder.

Analysis of 326X7A First Enlistment Personnel

As could be expected, the 130 A-shred first-enlistment personnel spend the majority of their time (88 percent) performing technical functions. General avionics maintenance functions, such as operating AGE, performing safety wiring, and adjusting avionics systems minor hardware, consume much of their work time. Many of the aircraft-specific tasks performed relate to maintaining auxiliary flight reference systems (AFRS) and stall inhibitor systems (SIS). Table 16 provides a listing of the representative tasks performed by 326X7A first-enlistment personnel.

Illustrated in Table 19 are the test equipment used and avionics systems inspections performed by first-enlistment A-shred incumbents. The most common test equipment used are electrical connector aircraft wiring repair tool kits (DCM-216), fuel quantity cap test sets (TF-20 or GTF-6), and TTU-205 C/E pitot static system testers. A-shred first-enlistment personnel tend to use less test equipment than the other two shreds, with only four pieces of equipment being utilized by over 30 percent of the group. A-shred first-enlistment personnel also perform avionics systems inspections less than the B- and C-shred first-enlistment personnel.

Analysis of 326X7B First-Enlistment Personnel

The 61 B-shred first-enlistment personnel spend only 16 percent of their job on the non-technical aspects of the 326X7 job. General avionics maintenance functions, such as operating AGE, performing safety wiring, maintaining minor avionics systems hardware, and interpreting wiring diagrams, consume a large part of their work time. Tasks tending to be performed more by F-15 personnel relate to such systems as air inlet controllers, attitude heading reference systems, and BIT control panels. Table 17 lists representative tasks for B-shred first-enlistment personnel.

B-shred first-enlistment personnel use automatic flightline test sets, electrical connector aircraft wiring repair tool kits (DCM-216), fuel quantity gauging test boxes (68D310016) proximity control switch test boxes, and TTU-205 C/E pitot-static system testers frequently in their job. Proximity control switch test boxes seem to be F-15 aircraft-specific, since B-shred, but not A- or C-shred, first-enlistment personnel use this equipment regularly in their job.

Analysis of 326X7C First-Enlistment Personnel

Comprised of 26 individuals, the 326X7 C-shred first-enlistment group spends 89 percent of their time performing technical functions. As is the case with the other first-enlistment shred groups, this group spends much of their time performing general avionics maintenance functions such as operating AGE, performing safety wiring, and so on. C-shred personnel tend to perform tasks relating to flight control computers to a greater extent than the other shred groups. Table 18 provides the representative tasks performed by C-shred first-enlistment personnel.

As indicated in Table 19, C-shred first-enlistment personnel utilize more test equipment in their job than either A- or B-shred first-enlistment incumbents. There are eight pieces of test equipment used by more than 30 percent of the C-shred first-enlistment group, as opposed to only four for A-shred and six for B-shred first enlistees. The most common test equipment used by the C-shred group are capacitance test sets (472914), DC fuel quantity test sets (472844), electrical connector aircraft wiring repair tool kits (DCM-216), flight control self-test testor/word readers (16U14521-1), fuel quantity cap test sets (TF-20 or GTF-6), fuel quantity gauging test boxes (68D310016), and TTU-205 C/E pitot-static system testers. Wheel spin-up test fixtures are used by 46 percent of the C-shred group and tend to be used only by the C-shred. Flight control self-test testor/word readers, capacitance sets, and DC fuel quantity test sets are used substantially more by first-enlistment C-shred workers than either the A- or B-shred groups.

Analysis of Specialty Training Standards (STS)

The 326X7A, 326X7B, and 326X7C STSs were individually matched to the tasks in the 326X7 job inventory by the 326X7 career ladder training manager. This matching consists of taking the STS item by item and identifying corresponding tasks in the job inventory which relate to the STS item. Each task in the inventory is listed, along with the percentage of first job, first enlistment, 5-skill level, 7-skill level, and total 326X7 personnel in the specified shred (no shred for 7-skill levels) who reported performing it. Each item in the STS can then be examined on the basis of what percentage of these groups perform tasks related to the specific STS item. As a result of this, STS items which have few or no members performing related tasks may possibly be deleted from the STS. In the same way, tasks not referenced to the STS which have a high percentage of personnel performing them may need to be added to the STS, depending on the nature of the task and

whether it can be matched to an STS item. This judgment must be made by the training officials, in accordance with ATCR 52-22, since the training officials provided the initial STS-inventory matching and are most qualified to make such judgments in the field.

On the basis of the examination of the 326X7A, 326X7B, and 326X7C STSs, dated either April or December 1979, no potential problem areas were identified. A listing of the tasks not referenced to each of these STSs is available in Appendix B.

FIGURE 2

DISTRIBUTION OF FIRST ENLISTMENT PERSONNEL ACROSS CAREER LADDER JOBS
(PERCENT MEMBERS RESPONDING)
(N=252)

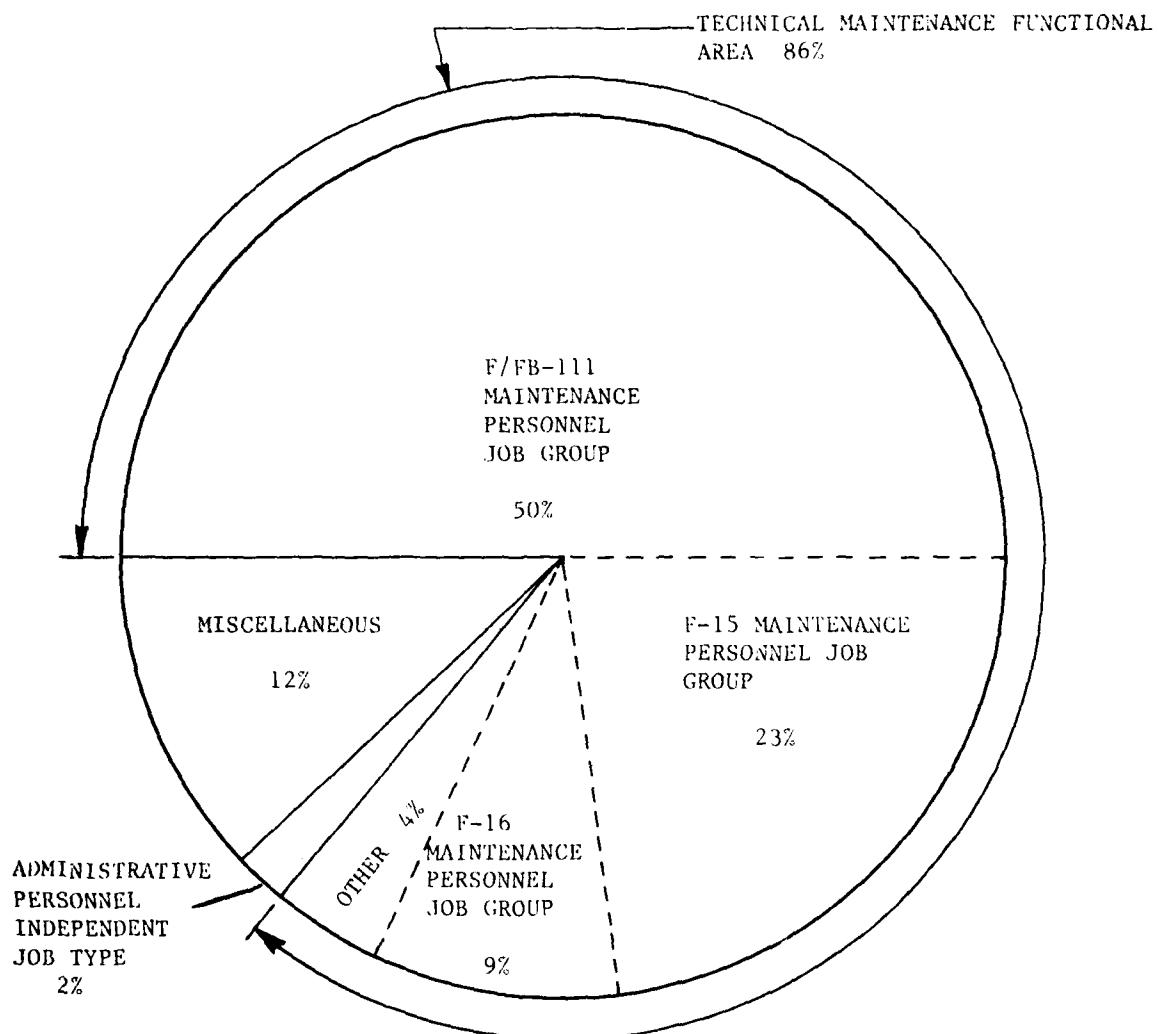


TABLE 16
REPRESENTATIVE TASKS PERFORMED BY 326X7A FIRST ENLISTMENT PERSONNEL
(N=130)

TASKS	PERCENT MEMBERS PERFORMING
P411 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL COMPUTERS	90
P457 PERFORM OPERATIONAL CHECKS OF FLIGHT CONTROL COMPUTERS	90
P409 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL AUTOPILOT DAMPER PANELS	90
P423 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL RATE GYROSCOPE ASSEMBLIES	89
P444 PERFORM FLIGHT CONTROL COMPUTER SELF-TESTS	88
P443 PERFORM FLIGHT CONTROL AUTOPILOT QUICK CHECKS	88
Q470 ISOLATE MALFUNCTIONS TO AIR DATA COMPUTERS (ADC) OR CENTRAL AIR DATA COMPUTERS (CADC)	88
P446 PERFORM FLIGHT CONTROL MANUAL TRIM CHECKS	88
P439 PERFORM FLIGHT CONTROL ALTITUDE HOLD OR MACH HOLD CHECKS	88
P412 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL DAMPER SERVO ACTUATORS	88
Q489 PERFORM OPERATIONAL CHECKS OF ADC OR CADC SYSTEMS	88
P448 PERFORM FLIGHT CONTROL PITCH ATTITUDE STABILIZATION CHECKS	88
S538 ISOLATE MALFUNCTIONS TO ENGINE PRESSURE RATIO INDICATORS	88
Q480 ISOLATE MALFUNCTIONS TO PITOT-STATIC SYSTEM TUBING	88
Q488 PERFORM LEAK CHECKS OF PITOT-STATIC SYSTEMS	87
S543 ISOLATE MALFUNCTIONS TO FORWARD OR AFT FUEL QUANTITY INDICATORS	87
P451 PERFORM FLIGHT CONTROL STABILITY AUGMENTATION CHECKS	87
P438 PERFORM FLIGHT CONTROL ADVERSE YAW COMPENSATION CHECKS	87
R524 PERFORM OPERATIONAL CHECKS OF AFRS ATTITUDE OR HEADING SYSTEMS	87
P449 PERFORM FLIGHT CONTROL ROLL ATTITUDE STABILIZATION CHECKS	87
Q475 ISOLATE MALFUNCTIONS TO AIRSPEED MACH INDICATORS	87
S546 ISOLATE MALFUNCTIONS TO FUEL QUANTITY INTERMEDIATE DEVICES OR CONTROL UNITS	87
R531 REMOVE OR INSTALL HSIs	87
Q494 PERFORM OPERATIONAL CHECKS OF PITOT STATIC PROBE HEATERS	87
R533 REMOVE OR INSTALL STANDBY ATTITUDE INDICATORS	87
Q481 ISOLATE MALFUNCTIONS TO STANDBY VERTICAL VELOCITY INDICATORS	87
F186 ADJUST AVIONIC SYSTEMS MINOR HARDWARE SUCH AS SCREWS OR CONTROL KNOBS	87
Q499 REMOVE OR INSTALL ADC OR CADC SYSTEM LRUs	86
P452 PERFORM FLIGHT CONTROL STICK SWITCH CONFIDENCE CHECKS	86
R509 ISOLATE MALFUNCTIONS TO AUXILIARY FLIGHT REFERENCE SYSTEMS	86
F191 OPERATE AGE, SUCH AS POWER UNITS, HEATERS, COOLING UNITS, OR LIGHT CARTS	82

TABLE 17

REPRESENTATIVE TASKS PERFORMED BY 326X7B FIRST ENLISTMENT PERSONNEL
(N=62)

TASKS	PERCENT MEMBERS PERFORMING
F191 OPERATE AGE, SUCH AS POWER UNITS, HEATERS, COOLING UNITS, OR LIGHT CARTS	89
F211 REMOVE OR INSTALL AVIONIC SYSTEMS MINOR HARDWARE SUCH AS SCREWS OR CONTROL KNOBS	87
F187 INTERPRET AIRCRAFT INTERCONNECTING WIRING DIAGRAMS	85
F186 ADJUST AVIONIC SYSTEMS MINOR HARDWARE SUCH AS SCREWS OR CONTROL KNOBS	85
F190 ISOLATE MALFUNCTIONS TO DEFECTIVE INTERCONNECTING WIRING	85
F214 REMOVE OR INSTALL CANNON-PLUG CONNECTORS	85
F204 PERFORM OPERATIONAL CHECKS OF AVIONICS STATUS PANELS	84
Q470 ISOLATE MALFUNCTIONS TO AIR DATA COMPUTERS (ADC) OR CENTRAL AIR DATA COMPUTERS (CADC)	84
F223 REPAIR WIRING	84
Q479 ISOLATE MALFUNCTIONS TO PITOT-STATIC PROBES	84
P436 OPERATE AUTOMATIC FLIGHTLINE TEST SETS	82
Q488 PERFORM LEAK CHECKS OF PITOT-STATIC SYSTEMS	82
Q489 PERFORM OPERATIONAL CHECKS OF ADC OR CADC SYSTEMS	82
F226 VISUALLY INSPECT AVIONICS STATUS PANELS	82
P440 PERFORM FLIGHT CONTROL ALTITUDE OR ATTITUDE HOLD CHECKS	82
P430 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL TRIM SYSTEMS	82
P427 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL STICK FORCE SENSOR ASSEMBLIES	82
T628 REMOVE OR INSTALL AOA TRANSMITTERS	82
T597 ISOLATE MALFUNCTIONS TO AOA TRANSMITTERS	82
T596 ISOLATE MALFUNCTIONS TO AOA INDICATORS	82
Q483 ISOLATE MALFUNCTIONS TO TOTAL TEMPERATURE PROBES	82
P457 PERFORM OPERATIONAL CHECKS OF FLIGHT CONTROL COMPUTERS	81
Q499 REMOVE OR INSTALL ADC OR CADC SYSTEM LRUs	81
F205 PERFORM SAFETY WIRING	81
R511 ISOLATE MALFUNCTIONS TO ATTITUDE HEADING REFERENCE SYSTEM (AHRS) DISPLACEMENT GYROSCOPES	81
R516 ISOLATE MALFUNCTIONS TO HORIZONTAL SITUATION INDICATORS (HSI)	81
F198 OPERATE PROXIMITY SWITCH CONTROL BOXES	81
F224 RESET FAULT INDICATOR LATCHES	81
S581 REMOVE OR INSTALL FUEL QUANTITY INDICATING SYSTEM COMPONENTS	81
F188 ISOLATE MALFUNCTIONS IN AVIONICS STATUS PANELS	81

TABLE 18
REPRESENTATIVE TASKS PERFORMED BY 326X7C FIRST ENLISTMENT PERSONNEL
(N=26)

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
P422 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL POWER SUPPLIES	92
P411 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL COMPUTERS	92
F191 OPERATE AGE, SUCH AS POWER UNITS, HEATERS, COOLING UNITS, OR LIGHT CARTS	92
Q489 PERFORM OPERATIONAL CHECKS OF ADC OR CADC SYSTEMS	92
P446 PERFORM FLIGHT CONTROL MANUAL TRIM CHECKS	92
F186 ADJUST AVIONIC SYSTEMS MINOR HARDWARE SUCH AS SCREWS OR CONTROL KNOBS	92
F211 REMOVE OR INSTALL AVIONIC SYSTEMS MINOR HARDWARE SUCH AS SCREWS OR CONTROL KNOBS	92
T597 ISOLATE MALFUNCTIONS TO AOA TRANSMITTERS	92
T615 PERFORM OPERATIONAL CHECKS OF AOA TRANSMITTERS	92
Q494 PERFORM OPERATIONAL CHECKS OF PITOT STATIC PROBE HEATERS	92
T596 ISOLATE MALFUNCTIONS TO AOA INDICATORS	92
F189 ISOLATE MALFUNCTIONS TO AVIONICS RELAY PACKAGES OR RELAY MATRIXES	92
P458 PERFORM OPERATIONAL CHECKS OF FLIGHT CONTROL ELECTRONIC COMPONENT ASSEMBLIES	88
P417 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL PANELS	88
P429 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL TEST PANELS	88
P415 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL LATERAL OR NORMAL ACCELEROMETER ASSEMBLIES	88
P413 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL ELECTRONIC COMPONENT ASSEMBLIES	88
Q488 PERFORM LEAK CHECKS OF PITOT-STATIC SYSTEMS	88
P431 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL TRIM PANELS	88
Q486 OPERATE PRESSURE OR TEMPERATURE TEST SETS	88
P430 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL TRIM SYSTEMS	88
P459 PERFORM OPERATIONAL CHECKS OF FLIGHT CONTROL LATERAL OR NORMAL ACCELEROMETER ASSEMBLIES	88
S534 CALIBRATE FUEL QUANTITY INDICATING SYSTEMS	88
F187 INTERPRET AIRCRAFT INTERCONNECTING WIRING DIAGRAMS	88
P428 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL STICK GRIP ASSEMBLIES	88
P424 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL SIDE-SLIP DIFFERENTIAL PRESSURE SENSORS	88
Q479 ISOLATE MALFUNCTIONS TO PITOT-STATIC PROBES	88
F205 PERFORM SAFETY WIRING	88
T614 PERFORM OPERATIONAL CHECKS OF AOA INDICATORS	88

TABLE 19

**MOST COMMON TEST EQUIPMENT USED
AND AVIONICS SYSTEMS INSPECTIONS PERFORMED BY FIRST ENLISTMENT PERSONNEL
(PERCENT MEMBERS USING OR PERFORMING)**

<u>TEST EQUIPMENT USED</u>	<u>FIRST ENLISTMENT A-SHRED PERSONNEL (N=130)</u>	<u>FIRST ENLISTMENT B-SHRED PERSONNEL (N=61)</u>	<u>FIRST ENLISTMENT C-SHRED PERSONNEL (N=26)</u>
AUTOMATIC FLIGHTLINE TEST SETS	12	71	8
CAPACITANCE TEST SETS (472914)	31	15	85
DC FUEL QUANTITY TEST SETS (472844)	16	29	85
ELECTRICAL CONNECTOR AIRCRAFT WIRING REPAIR TOOL KITS (DCM-216)	55	71	58
FLIGHT CONTROL SELF-TEST TESTOR/WORD READERS (16U14521-1)	5	15	92
FUEL QUANTITY CAP TEST SETS (TF-20 OR GTF-6)	87	36	81
FUEL QUANTITY GAUGING TEST BOXES (68D310016)	3	73	54
INCLINOMETERS	9	3	27
PRESSURIZATION TEST SETS	9	18	12
PROXIMITY CONTROL SWITCH TEST BOXES	2	76	0
TTU-205 C/E PITOT-STATIC SYSTEM TESTERS	91	87	92
SUBSYSTEM TIE-IN TEST SETS	17	3	0
WHEEL SPIN-UP TEST FIXTURES	1	0	46
NONE	9	8	4
<hr/>			
<u>INSPECTIONS PERFORMED</u>			
FOD INSPECTIONS	31	65	50
AIRCRAFT ACCEPTANCE INSPECTIONS	3	37	35
PHASE INSPECTIONS	55	79	54
780 INSPECTIONS	18	3	12
NONE	2	10	19

ANALYSIS OF JOB SATISFACTION

The main function of this section is to see how job satisfaction indicators change with experience in the career ladder and how they differ between shreds. Table 20 lists the job satisfaction for the experience groups, as well as for a comparative group made up of individuals in other recently-surveyed similar ladders.

As illustrated in Table 20, all 326X7 first-enlistment personnel find their job more interesting than the first-enlistment comparative sample. The C-shred first-enlistment 326X7 personnel find their job the least interesting of the three shreds; they are also the most dissatisfied shred group in terms of how the job utilizes their training. Surprisingly, these C-shred personnel have the highest reenlistment intentions though, with the B-shred having the lowest. Overall, the 326X7 first enlistment personnel seem to have generally higher job satisfaction than the comparative sample.

With progression in the career ladder, reenlistment intentions steadily increase; however, other job satisfaction indicators do not seem to consistently increase. Consequently, while 326X7 first-enlistment personnel in general report greater job satisfaction than the comparative sample, by the time members have over 97 months in the career ladder their job satisfaction is about the same as the comparative sample. This is atypical of most career ladders where job satisfaction steadily increases with experience.

In summary, 326X7 first-enlistment personnel have higher job satisfaction than most similar specialties, with the C-shred being the least satisfied. However, contrary to most specialties, job satisfaction does not increase with experience in the career ladder.

One potential problem area is the reenlistment intent among B-shred (F-15) first-enlistment personnel, since only 26 percent of this group indicate plans to reenlist. This low percentage may suggest future problems for F-15 maintenance in terms of having sufficient numbers of experienced personnel to supervise maintenance and provide on-the-job training.

TABLE 20
JOB SATISFACTION INDICES FOR EXPERIENCE GROUPS
(PERCENT MEMBERS RESPONDING)

	FIRST ENLISTMENT A-SHRED (F/FB-111) PERSONNEL (N=130)	FIRST ENLISTMENT B-SHRED (F-15) PERSONNEL (N=62)	FIRST ENLISTMENT C-SHRED (F-16) PERSONNEL (N=26)	FIRST ENLISTMENT COMPARATIVE SAMPLE* (N=1,374)	SECOND ENLISTMENT 322X/A (N=102)	SECOND ENLISTMENT 322X/B (N=853)	CAREER ENLISTMENT COMPARATIVE SAMPLE* (N=123)	CAREER ENLISTMENT COMPARATIVE SAMPLE* (N=1,426)
<u>EXPRESSED JOB INTEREST:</u>								
DULL	10	11	15	24	17	17	15	14
SO-SO	12	16	19	20	14	22	12	16
INTERESTING	77	73	66	56	69	61	72	70
NOT REPORTED	1	0	0	0	0	0	1	0
<u>PERCEIVED UTILIZATION OF TALENTS:</u>								
LITTLE OR NOT AT ALL	25	26	27	37	28	31	22	24
FAIRLY WELL OR BETTER	75	74	73	63	72	69	77	76
NOT REPORTED	0	0	0	0	0	0	1	0
<u>PERCEIVED UTILIZATION OF TRAINING:</u>								
LITTLE OR NOT AT ALL	17	23	31	30	19	28	27	25
FAIRLY WELL OR BETTER	83	76	69	69	80	71	72	75
NOT REPORTED	0	1	0	1	1	1	1	0
<u>REENLISTMENT INTENTIONS:</u>								
PLAN TO RETIRE	0	0	0	0	**	0	**	19
PLAN NOT TO REENLIST	60	73	50	66	45	51	16	31
PLAN TO REENLIST	37	26	46	33	55	48	63	67
NOT REPORTED	3	1	4	1	0	1	2	2

* COMPARATIVE SAMPLE INCLUDES PERSONNEL FROM A NUMBER OF SIMILAR MAINTENANCE CAREER FIELDS SURVEYED IN 1981 (INCLUDES AFS's 302X0, 307X0, 308X0, 322X/A/B/C, and 427X3; TOTAL COMPARATIVE SAMPLE WAS COMPRISED OF 3,653 RESPONDENTS).

** "PLAN NOT TO REENLIST" INCLUDES "PLAN TO RETIRE" FOR 1980 COMPARATIVE DATA

COMPARISON OF 32657X CONUS AND OVERSEAS GROUPS

Personnel stationed overseas sometimes perform a different job than those incumbents assigned to bases within the Continental United States (CONUS). Usually, personnel overseas tend to be more experienced and perform more managerial and supervisory tasks. Only the 5-skill level specialists are examined; since they do the major technical maintenance in the career ladder, any technical differences in the jobs performed should be apparent in this comparison. Consequently, the DAFSC 32657A and B-shred CONUS personnel are compared to their counterparts overseas. C-shred personnel are not examined because, at the time of this analysis, no F-16 squadrons were assigned to U. S. bases overseas.

32657 A-shred personnel. Ninty-one percent of all 32657A specialists assigned overseas are assigned to USAFE. The majority of the CONUS specialists are in either TAC or SAC. Generally, the overseas A-shred specialists have slightly more time in service and work mainly on F-111E and F aircraft, as opposed to the CONUS specialists, who usually maintain the F-111A, D and FB-111A aircraft (see Table 23).

Table 21 presents the tasks that best differentiate CONUS from the overseas group. As can be seen, CONUS incumbents maintain cowl position indicators and translate cowls more than overseas personnel. Overseas specialists, on the other hand, maintain oxygen converters and oxygen quantity indicators, as well as aircraft pods, more often. In general, major trends were found.

32657 B-Shred Personnel. Overseas specialists in this group are evenly split between USAFE and PACAF as their major command. Almost all CONUS incumbents were in TAC. The overseas group is noticeably more experienced, with members of this group having an average time in service (TAFMS) of 67 months, as opposed to 40 months for the CONUS specialists. As Table 23 indicates, overseas personnel tend to work on the F-15C and D aircraft, while the CONUS specialists focus on F-15A and B aircraft.

Overall, the job of the two groups is not very different. Table 22 displays the main differentiating tasks. As can be seen, some technical tasks are performed more by CONUS as opposed to overseas specialists. The overseas group, on the other hand, tends to perform more administrative and supervisory tasks.

To summarize, it can be said that there is no substantial difference between the job performed by 32657A and B personnel stationed in CONUS versus overseas. Some differences exist in the models of aircraft maintained and the tasks specific to these models, but the jobs performed are not substantially different.

TABLE 21
 TASKS WHICH BEST DIFFERENTIATE DAFSC 32657A CONUS
 AND OVERSEAS PERSONNEL
 (PERCENT MEMBERS PERFORMING)

<u>TASKS</u>	<u>DAFSC 32657A CONUS PERSONNEL (N=107)</u>	<u>DAFSC 32657A OVERSEAS PERSONNEL (N=56)</u>	<u>DIFFERENCE</u>
S537 ISOLATE MALFUNCTIONS TO COWL POSITION INDICATORS	40	7	33
S576 REMOVE OR INSTALL COWL POSITION INDICATORS	37	5	32
S561 PERFORM OPERATIONAL CHECKS OF COWL POSITION INDICATORS	37	7	30
Y827 JACK OR LEVEL AIRCRAFT	36	7	29
S559 ISOLATE MALFUNCTIONS TO TRANSLATING COWLS	40	13	27
T636 REMOVE OR INSTALL OXYGEN QUANTITY INDICATORS	19	41	-22
T604 ISOLATE MALFUNCTIONS TO OXYGEN CONVERTERS	9	32	-23
F194 OPERATE HYDRAULIC PUMPING UNITS	45	70	-25
T605 ISOLATE MALFUNCTIONS TO OXYGEN QUANTITY INDICATORS	12	45	-33
Y840 REMOVE OR INSTALL AIRCRAFT PODS	8	50	-42

TABLE 22

EXAMPLES OF TASKS WHICH BEST DIFFERENTIATE DAFSC 32657B CONUS AND
 OVERSEAS PERSONNEL
 (PERCENT MEMBERS PERFORMING)

<u>TASKS</u>	<u>DAFSC 32657B CONUS PERSONNEL (N=60)</u>	<u>DAFSC 32657B OVERSEAS PERSONNEL (N=27)</u>	<u>DIFFERENCE</u>
P425 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL STALL WARNING SYSTEMS	62	33	29
R506 ADJUST MAGNETIC AZIMUTH DETECTORS (MAD)	62	33	29
P415 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL LATERAL OR NORMAL ACCELEROMETER ASSMEBLIES	77	56	21
F216 REMOVE OR INSTALL ELECTRICAL CIRCUIT BREAKERS	62	41	21
R508 CALIBRATE REMOTE COMPASS TRANSMITTERS OR MADs	50	30	20
A5 DETERMINE WORK PRIORITIES	23	48	-25
A3 COORDINATE WORK WITH OTHER SECTIONS	22	48	-26
E166 MAKE ENTRIES ON SERVICEABLE TAG-MATERIEL (DD FORM 1574)	30	59	-29
E146 MAKE ENTRIES ON JOB PROFICIENCY GUIDE CONTINUATION SHEET (AF FORM 797)	22	52	-30
E169 MAKE ENTRIES ON SPECIALIST DISPATCH CONTROL LOG (AF FORM 2430)	28	59	-31
Y831 OPERATE OR SERVICE MAINTENANCE DISPATCH VEHICLES	17	52	-35

TABLE 23

AIRCRAFT SYSTEMS MAINTAINED BY 32657A/B CONUS AND OVERSEAS PERSONNEL
 (PERCENT MEMBERS RESPONDING)

<u>AIRCRAFT MODEL</u>	<u>DAFSC 32657A CONUS PERSONNEL (N=107)</u>	<u>DAFSC 32657A OVERSEAS PERSONNEL (N=56)</u>	<u>DAFSC 32657B CONUS PERSONNEL (N=60)</u>	<u>DAFSC 32657B OVERSEAS PERSONNEL (N=27)</u>
F-15A	2	0	83	22
F-15B	2	0	75	19
F-15C	2	0	18	82
F-15D	0	0	18	74
F-111A	43	2	0	0
F-111D	24	4	5	0
F-111E	7	43	3	4
F-111F	7	48	3	0
EF-111A	4	0	0	0
FB-111A	28	0	2	0

ANALYSIS OF MAJOR COMMAND DIFFERENCES

Another possible dimension along which jobs performed by individuals may vary is major command (MAJCOM). Consequently, an examination of the job, background, and job satisfaction data for these groups is in order. Five major commands, comprising 95 percent of the 326X7X sample, were examined. These commands were: (1) Tactical Air Command (TAC); (2) United States Air Forces Europe (USAFE); (3) Pacific Air Forces (PACAF); (4) Strategic Air Command (SAC); and (5) Air Training Command (ATC). Some differences emerged between the various major commands.

Tables 24 through 26 provide job, background, and job satisfaction data for these MAJCOM groups. For an overall view of how the jobs vary among MAJCOM groups, Table 27 lists the MAJCOM distribution across the job groups identified in the career ladder structure.

TAC

The 246 members of TAC responding to the inventory account for 52 percent of the sample. These members spend the most time of any major command maintaining integrated avionics instrument and flight control systems. Sixty-eight percent of this group are in their first enlistment, and 97 percent of the TAC incumbents report working under the POMO concept. The aircraft models most widely maintained by TAC personnel are the F-15A and B, the F-16A and B, and the F-111A and D.

Job satisfaction is surprisingly high for a group with such a high percentage of first-enlistees. Over 70 percent of the members find their job interesting and their talents and training well utilized. Reenlistment intentions are low, as could be expected, with only 45 percent of these incumbents intending to reenlist.

USAFE

Consisting of 115 individuals, these personnel perform a job similar to that of the TAC incumbents; however, USAFE personnel maintain F-111E and F aircraft substantially more than any other MAJCOM. The majority of personnel in USAFE are A-shred personnel or have no shred. Forty percent of this group are in their first enlistment and 42 percent indicate working under a POMO organization. This is the second most experienced group, with 54 months average time in service.

Job satisfaction is fairly high for this group, with 67 percent finding their job interesting. Only 47 percent indicate intentions to reenlist.

PACAF

This is the smallest representation of any major command discussed, with 26 incumbents. Pacific Air Forces (PACAF) personnel spend more time than any other MAJCOM maintaining forms, records, and reports. PACAF

personnel also maintain the F-15 C and D substantially more than any other MAJCOM; the F-15 is the only aircraft reportedly maintained by these personnel. Fifty-eight percent of the PACAF group indicate supervising other personnel, and all of the PACAF personnel report working under the POMO concept.

Job satisfaction is lower for these incumbents, with only 58 percent finding their job interesting and feeling that their training is well utilized. Additionally, half of these personnel report intentions to reenlist.

SAC

The 36 individuals responding to the inventory who are assigned to the Strategic Air Command (SAC) all report maintaining the FB-111A aircraft. This is the only aircraft maintained by a majority of the SAC personnel. All SAC personnel are either in the A-shred or have no shred. They report the broadest job of any group, with members performing an average of 227 tasks. Sixty-one percent of these SAC members are in their first enlistment.

Job satisfaction indices are the highest for SAC personnel of any of the major commands discussed. Over three-quarters of the SAC incumbents report an interesting job and perceive their talents and training as well utilized. However, only 31 percent of these SAC personnel indicate plans to reenlist.

ATC

Comprised of 31 individuals, the Air Training Command (ATC) group consists mainly of resident technical and Field Training Detachment (FTD) course instructors. This group has the highest average grade and experience of any major command discussed. Eighty-one percent of the group hold 7-skill level DAFSCs. The F-16A and B are the only aircraft maintained by over 10 percent of the ATC personnel.

All of the job satisfaction indices and reenlistment intentions are the highest of any major command for this group. As could be expected from such a high-experience group, 71 percent of the members report plans to reenlist.

Summary

The jobs performed by major command groups are technically similar (except for the ATC group concerned mainly with training). The main differentiating factor is the model aircraft maintained by the majority of the major command. Distinguishing tasks tend to be those aircraft-specific tasks relevant to the aircraft models maintained by that major command.

Job satisfaction is the highest for ATC personnel, and lowest for PACAF incumbents; SAC has the lowest reenlistment intentions, with ATC having the highest.

TABLE 24
BACKGROUND INFORMATION FOR MAJOR COMMANDS

	<u>TAC</u>	<u>USAFE</u>	<u>PACAF</u>	<u>SAC</u>	<u>ATC</u>
NUMBER IN GROUP	246	115	26	36	31
PERCENT OF SAMPLE	52%	26%	5%	8%	6%
PERCENT LOCATED OVERSEAS	3%	97%	96%	0%	10%
<hr/>					
<u>DAFSC DISTRIBUTION</u>					
32637	10%	5%	0%	8%	0%
32657	76%	62%	69%	78%	19%
32677	14%	33%	31%	14%	81%
<hr/>					
<u>NUMBER IN EACH SHRED</u>					
A-SHRED (F/FB-111)	83	62	0	30	6
B-SHRED (F-15)	65	17	16	0	1
C-SHRED (F-16)	47	0	0	0	2
NO SHRED INDICATED	51	36	10	6	22
<hr/>					
AVERAGE GRADE	E-4	E-4-5	E-4-5	E-4	E-5-6
AVERAGE TIME IN SERVICE (MONTHS TAFMS)	54	90	80	65	142
AVERAGE TIME IN CAREER FIELD (MONTHS)	36	59	39	55	79
PERCENT IN FIRST ENLISTMENT	68%	40%	35%	61%	6%
<hr/>					
PERCENT SUPERVISING	28%	40%	58%	42%	23%
<hr/>					
AVERAGE NUMBER OF TASKS PERFORMED	180	196	150	227	91
PERCENT IN POMO ORGANIZATION	97%	42%	100%	28%	23%
PERCENT MEMBERS FEMALE	11%	10%	12%	8%	10%

TABLE 25
JOB SATISFACTION INDICES FOR MAJOR COMMANDS
(PERCENT MEMBERS RESPONDING)

	<u>TAC</u>	<u>USAFE</u>	<u>PACAF</u>	<u>SAC</u>	<u>ATC</u>
<u>EXPRESSED JOB INTEREST:</u>					
DULL	12	20	27	3	6
SO-SO	15	12	12	14	13
INTERESTING	72	67	58	81	81
NOT REPORTED	1	1	3	2	0
<u>PERCEIVED UTILIZATION OF TALENTS:</u>					
LITTLE OR NOT AT ALL	24	30	35	22	7
FAIRLY WELL OR BETTER	75	69	65	78	93
NOT REPORTED	1	1	0	0	0
<u>PERCEIVED UTILIZATION OF TRAINING:</u>					
LITTLE OR NOT AT ALL	21	27	42	14	10
FAIRLY WELL OR BETTER	78	72	58	86	90
NOT REPORTED	1	1	0	0	0
<u>REENLISTMENT INTENTIONS:</u>					
PLAN TO RETIRE	3	10	0	3	16
PLAN NOT TO REENLIST	51	42	46	64	13
PLAN TO REENLIST	45	47	50	31	71
NOT REPORTED	1	1	4	2	0

TABLE 26
AIRCRAFT MODELS MAINTAINED ACCORDING TO MAJOR COMMAND
(PERCENT MEMBERS MAINTAINING)

<u>AIRCRAFT MODEL</u>	<u>TAC</u>	<u>USAFE</u>	<u>PACAF</u>	<u>SAC</u>	<u>ATC</u>
F-15A	30	14	12	0	7
F-15B	28	13	8	0	7
F-15C	7	18	81	0	0
F-15D	8	17	81	0	0
F-16A	22	0	0	0	13
F-16B	20	0	0	0	13
F-111A	24	3	0	8	3
F-111D	13	1	0	3	7
F-111E	2	37	0	3	0
F-111F	5	33	0	3	0
EF-111A	0	0	0	3	0
FB-111A	0	1	0	100	3

TABLE 27
DISTRIBUTION OF MEMBERS OF EACH JOB GROUP WITHIN
EACH MAJOR COMMAND

	<u>TAC</u>	<u>USAFE</u>	<u>PACAF</u>	<u>SAC</u>	<u>ATC</u>
TECHNICAL MAINTENANCE FUNCTIONAL AREA	200	91	21	31	8
I. F-15 MAINTENANCE PERSONNEL	56	17	18	0	0
II. F/FB-111 MAINTENANCE PERSONNEL	94	62	0	30	6
III. F/FB-111 FIRST-LINE SUPERVISORS	2	4	0	1	0
IV. F-15 INST, FLT, AND ATTK CONTROL, AND COMM, NAV, AND PEN-AIDS SYSTEMS MAINTENANCE PERSONNEL	2	3	0	0	1
V. F-16 MAINTENANCE PERSONNEL	41	0	0	0	0
VI. EF/F/FB-111 INST, FLT, AND ATTK CONTROL, AND COMM, NAV, AND PEN-AIDS SYSTEMS MAINTENANCE PERSONNEL	2	0	0	0	0
VII. F-15/16 FTD INSTRUCTORS	0	0	0	0	8
VIII. ADMINISTRATIVE PERSONNEL	4	2	2	0	0
IX. QUALITY CONTROL (QC) PERSONNEL	4	1	0	1	0
X. MANAGEMENT AND SUPERVISION PERSONNEL	4	1	0	2	2
XI. TECHNICAL SCHOOL INSTRUCTORS	0	0	0	0	9

ANALYSIS OF WRITE-IN COMMENTS

As in most occupational surveys, respondents are invited to write in any comments they have relative to their job. The inventory for the 326X7 career ladder was also designed to survey the 326X6 and 326X8 career ladders. Consequently, write-in comments are from personnel in any of these three ladders.

Some incumbents report working on the B-1 test project and feeling that the inventory was not really directed to the full range of their job. While some systems are comparable across aircraft models, not all are. The two major complaints of these personnel are that they are being misutilized or are tested unfairly for the job they perform. Here are examples of some of their write-in comments:

"Working on the B-1 test team has the disadvantage of working under-manned, so I wind up doing a 423X0s job more than my own."

"Being assigned to the B-1 test program, I am removed from most all Air Force maintenance procedures. Some of the aircraft systems are close but none are the same as any others. I do not use any Air Force forms, have no TO's, do not troubleshoot or isolate malfunctions. All maintenance is directed by a Rockwell or Boeing engineer in a step-by-step procedure. I feel I have been removed from my job that I have been trained. This also places me at a disadvantage at promotion testing."

"Being assigned to the B-1, I feel the majority of questions in this survey as well as the CDC or SKT do not pertain to my duty tasks. Some systems are similar, while others I've never seen. Most of all my job I perform now I couldn't expect to be tested on. I feel myself along with others in similar situations should be exempt from SKTs which do not pertain to duty tasks."

A number of individuals report dissatisfaction with working under the POMO concept. Personnel tend to feel they are being unfairly required to perform extra work outside their own AFSC without compensation. Typical comments from these personnel include:

"Before I submit to POMO, I will get out."

"Under the POMO concept as practiced at Holloman, specialists were shuffled to fill APG slots at the expense of their own upgrade training."

"POMO is no good. The present concept of training a little of everything insures poor quality maintenance."

"I believe that if we did away with POMO morale would be much higher. Reenlistment would go up and you would have better trained people in each AFSC."

"The Air Force just completely ruined my job by implementing POMO or COMO. I'm not a crew chief yet I have to do their job daily. But when it comes to testing for making rank they have a lower cut off, so it makes it easier for them to make it, which in turn makes them my supervisors."

There were several additional negative comments included about POMO. On the basis of the write-in comments, some individuals seem very unhappy with work under the POMO concept.

POMO VERSUS NON-POMO JOBS

Many personnel in the 326X7X career ladder are in an organization which operates under AFR 66-5. This regulation governs production-oriented maintenance organizations or POMOs. Some interest has been expressed in determining how well the concept of POMO is accepted in the field. To determine this, personnel who work in a POMO were compared to those who do not. There were 311 incumbents indicating assignment to a POMO, and 144 personnel reporting assignment to an organization other than a POMO (referred to hereafter as a non-POMO).

The tasks performed by POMO personnel are somewhat different. As expected, these differences are associated with differing weapons systems and missions for POMO units versus non-POMO personnel.

The most important comparison between the two groups is in the area of job satisfaction. Personnel filling out occupational surveys are invited to write comments on the back of the inventory booklets concerning problems with the inventory, different jobs or tasks performed, specific complaints, and so forth. The 326X6, 326X7, and 326X8 career ladders were all surveyed using the same inventory booklet containing the tasks of all three career ladders. In analyzing the write-in comments, it was found that some individuals are extremely dissatisfied with work under the POMO concept (see Analysis of Write-in Comments section of this report). In analyzing the overall data of all incumbents responding to the inventory in both POMO and non-POMO groups, it was found that job satisfaction data and reenlistment intentions did not substantially differ (see Table 28). Consequently, it can be said that some individuals are very much against the concept of POMO; but generally, individuals in the field do not differ in terms of job satisfaction and reenlistment intentions.

TABLE 28

JOB SATISFACTION OF POMO AND NON-POMO PERSONNEL
 (Percent Members Performing)

	<u>POMO PERSONNEL (N=311)</u>	<u>NON-POMO PERSONNEL (N=144)</u>
<u>EXPRESSED JOB INTEREST:</u>		
DULL	14	15
SO-SO	15	13
INTERESTING	70	72
<u>PERCEIVED UTILIZATION OF TALENTS:</u>		
LITTLE OR NOT AT ALL	26	26
FAIRLY WELL OR BETTER	73	74
<u>PERCEIVED UTILIZATION OF TRAINING:</u>		
LITTLE OR NOT AT ALL	24	24
FAIRLY WELL OR BETTER	75	76
<u>SENSE OF ACCOMPLISHMENT:</u>		
DISSATISFIED	21	26
NEITHER SATISFIED NOR DISSATISFIED	12	11
SATISFIED	66	63
<u>REENLISTMENT INTENTIONS:</u>		
PLAN TO RETIRE	4	8
PLAN NOT TO REENLIST	50	45
PLAN TO REENLIST	45	46

NOTE: Columns May Not Add to 100% Due to No Response

IMPLICATIONS

The 326X7X career ladder has high similarity in the technical job performed. Shreds are still distinguishable; however, the high overlap figures of the survey data and the number of common tasks performed by a high number of respondents indicate these differences across shreds are mainly due to a number of aircraft-specific tasks, while the general jobs performed across shreds are very much alike. Supervisory and managerial, administrative, quality control, and instructor jobs are also identified in the career ladder.

While the great majority of 326X7 personnel are being utilized in a way consistent with the present 3-shred classification structure, there are some individuals being used differently. A few individuals in AFLC and USAFE report a situation where 326X7 personnel are also performing 326X6 and 326X8 tasks on F-111 and F-15 systems. One additional small group of 326XX personnel who work on the B-1 system in Air Force Systems Command were identified through write-in comments. These personnel apparently are being used for a variety of aircraft maintenance tasks, in addition to servicing the avionics systems.

Write-in comments indicate a number of individuals are dissatisfied working under the POMO concept. A comparison of all personnel working under POMO versus those who do not, however, reveals no substantial difference in job satisfaction indicators. It seems that while some individuals are dissatisfied working under POMO, the overall job satisfaction of personnel under POMO is not noticeably affected.

In general, job satisfaction data for 326X7 groups were a bit higher than for comparable specialties surveyed in 1980. Reenlistment intent among first-enlistment 326X7 personnel varied markedly by aircraft system (shred-out), with more F-16 first-term personnel planning to reenlist than expected (46 percent) and fewer F-15 first-term incumbents (26 percent). This may suggest future problems for F-15 avionics maintenance in terms of having sufficient reenlistments to provide good OJT and to be supervisors.

APPENDIX A

TABLE A1

REPRESENTATIVE TASKS PERFORMED BY PERSONNEL
IN THE TECHNICAL MAINTENANCE FUNCTIONAL AREA (GRP065)

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING (N=366)</u>
Q488 PERFORM LEAK CHECKS OF PITOT-STATIC SYSTEMS	98
Q470 ISOLATE MALFUNCTIONS TO AIR DATA COMPUTERS (ADC) OR CENTRAL AIR DATA COMPUTERS (CADC)	98
T597 ISOLATE MALFUNCTIONS TO AOA TRANSMITTERS	98
Q479 ISOLATE MALFUNCTIONS TO PITOT-STATIC PROBES	98
T596 ISOLATE MALFUNCTIONS TO AOA INDICATORS	98
Q489 PERFORM OPERATIONAL CHECKS OF ADC OR CADC SYSTEMS	97
Q494 PERFORM OPERATIONAL CHECKS OF PITOT STATIC PROBE HEATERS	97
Q480 ISOLATE MALFUNCTIONS TO PITOT-STATIC SYSTEM TUBINE	97
P457 PERFORM OPERATIONAL CHECKS OF FLIGHT CONTROL COMPUTERS	96
P411 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL COMPUTERS	96
S581 REMOVE OR INSTALL FUEL QUANTITY INDICATING SYSTEM COMPONENTS	96
Q504 REMOVE OR INSTALL PITOT-STATIC PROBES	96
T614 PERFORM OPERATIONAL CHECKS OF AOA INDICATORS	96
F191 OPERATE AGE, SUCH AS POWER UNITS, HEATERS, COOLING UNITS, OR LIGHT CARTS	95
F187 INTERPRET AIRCRAFT INTERCONNECTING WIRING DIAGRAMS	95
P430 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL TRIM SYSTEMS	95
P423 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL RATE GYROSCOPE ASSEMBLIES	95
F186 ADJUST AVIONIC SYSTEMS MINOR HARDWARE SUCH AS SCREWS OR CONTROL KNOBS	95
Q475 ISOLATE MALFUNCTIONS TO AIRSPEED MACH INDICATORS	95
T628 REMOVE OR INSTALL AOA TRANSMITTERS	95
Q499 REMOVE OR INSTALL AVIONIC SYSTEMS MINOR HARDWARE SUCH AS SCREWS OR CONTROL KNOBS	94
T615 PERFORM OPERATIONAL CHECKS OF AOA TRANSMITTERS	94
S534 CALIBRATE FUEL QUANTITY INDICATING SYSTEMS	94
P446 PERFORM FLIGHT CONTROL MANUAL TRIM CHECKS	94
S580 REMOVE OR INSTALL FUEL FLOW INDICATORS	94
Q476 ISOLATE MALFUNCTIONS TO ALTITUDE OR VERTICAL VELOCITY INDICATORS	94
S547 ISOLATE MALFUNCTIONS TO FUEL QUANTITY PROBES	93
R533 REMOVE OR INSTALL STANDBY ATTITUDE INDICATORS	93
Q486 OPERATE PRESSURE OR TEMPERATURE TEST SETS	93
Q492 PERFORM OPERATIONAL CHECKS OF AIRSPEED MACH INDICATING SYSTEMS	93
S544 ISOLATE MALFUNCTIONS TO FUEL FLOW INDICATORS	93
P415 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL LATERAL OR NORMAL ACCELEROMETER ASSEMBLIES	92
R521 ISOLATE MALFUNCTIONS TO STANDBY ATTITUDE INDICATORS	92
P440 PERFORM FLIGHT CONTROL ALTITUDE OR ATTITUDE HOLD CHECKS	92
F214 REMOVE OR INSTALL CANNON-PLUG CONNECTORS	92
Q483 ISOLATE MALFUNCTIONS TO TOTAL TEMPERATURE PROBES	92

TABLE A2
REPRESENTATIVE TASKS PERFORMED BY F-15 MAINTENANCE PERSONNEL (GRP117)

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING (N=92)</u>
F187 INTERPRET AIRCRAFT INTERCONNECTING WIRING DIAGRAMS	99
R531 REMOVE OR INSTALL HSIs	99
F186 ADJUST AVIONIC SYSTEMS MINOR HARDWARE SUCH AS SCREWS OR CONTROL KNOBS	99
F191 OPERATE AGE, SUCH AS POWER UNITS, HEATERS, COOLING UNITS, OR LIGHT CARTS	98
S535 ISOLATE MALFUNCTIONS TO AIR INLET CONTROLLERS OR SPIKE CONTROLLERS	98
R525 PERFORM OPERATIONAL CHECKS OF AHRS	98
S581 REMOVE OR INSTALL FUEL QUANTITY INDICATING SYSTEM COMPONENTS	98
R516 ISOLATE MALFUNCTIONS TO HORIZONTAL SITUATION INDICATORS (HSI)	98
R513 ISOLATE MALFUNCTIONS TO AFRS OR AHRS ELECTRONIC CONTROL AMPLIFIERS	98
T614 PERFORM OPERATIONAL CHECKS OF AOA INDICATORS	98
S580 REMOVE OR INSTALL FUEL FLOW INDICATORS	98
R515 ISOLATE MALFUNCTIONS TO FLIGHT DIRECTOR COMPUTERS (FDC) OR FLIGHT DIRECTOR ADAPTORS (FDA)	98
Q488 PERFORM LEAK CHECKS OF PITOT-STATIC SYSTEMS	97
S534 CALIBRATE FUEL QUANTITY INDICATING SYSTEMS	97
F224 RESET FAULT INDICATOR LATCHES	97
Q470 ISOLATE MALFUNCTIONS TO AIR DATA COMPUTERS (ADC) OR CENTRAL AIR DATA COMPUTERS (CADC)	97
F223 REPAIR WIRING	97
Q493 PERFORM OPERATIONAL CHECKS OF BIT CONTROL PANELS	97
Q480 ISOLATE MALFUNCTIONS TO PITOT-STATIC SYSTEM TUBING	97
Q504 REMOVE OR INSTALL PITOT-STATIC PROBES	97
F204 PERFORM OPERATIONAL CHECKS OF AVIONICS STATUS PANELS	97
R530 REMOVE OR INSTALL FDCs OR FDAs	97
T596 ISOLATE MALFUNCTIONS TO AOA INDICATORS	97
S574 REMOVE OR INSTALL AIR INLET CONTROLLERS	96
Q489 PERFORM OPERATIONAL CHECKS OF ADC OR CADC SYSTEMS	96
R529 REMOVE OR INSTALL AFRS OR AHRS SYSTEM LRUs	96
F226 VISUALLY INSPECT AVIONICS STATUS PANELS	96
P440 PERFORM FLIGHT CONTROL ALTITUDE OR ATTITUDE HOLD CHECKS	96
F214 REMOVE OR INSTALL CANNON-PLUG CONNECTORS	96
F211 REMOVE OR INSTALL AVIONIC SYSTEMS MINOR HARDWARE SUCH AS SCREWS OR CONTROL KNOBS	96

TABLE A3

REPRESENTATIVE TASKS PERFORMED BY F/FB-111 MAINTENANCE PERSONNEL (GRP137)

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING (N=196)</u>
T595 ISOLATE MALFUNCTIONS TO ANGLE-OF-ATTACK (AOA) INDEXERS	100
P444 PERFORM FLIGHT CONTROL COMPUTER SELF-TESTS	99
P457 PERFORM OPERATIONAL CHECKS OF FLIGHT CONTROL COMPUTERS	99
Q488 PERFORM LEAK CHECKS OF PITOT-STATIC SYSTEMS	99
Q470 ISOLATE MALFUNCTIONS TO AIR DATA COMPUTERS (ADC) OR CENTRAL AIR DATA COMPUTERS (CADC)	99
Q475 ISOLATE MALFUNCTIONS TO AIRSPEED MACH INDICATORS	99
S546 ISOLATE MALFUNCTIONS TO FUEL QUANTITY INTERMEDIATE DEVICES OR CONTROL UNITS	99
T597 ISOLATE MALFUNCTIONS TO AOA TRANSMITTERS	99
T606 ISOLATE MALFUNCTIONS TO STANDBY AIR SPEED INDICATORS	99
P411 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL COMPUTERS	99
Q489 PERFORM OPERATIONAL CHECKS OF ADC OR CADC SYSTEMS	99
S543 ISOLATE MALFUNCTIONS TO FORWARD OR AFT FUEL QUANTITY INDICATORS	99
S581 REMOVE OR INSTALL FUEL QUANTITY INDICATING SYSTEM COMPONENTS	99
T596 ISOLATE MALFUNCTIONS TO AOA INDICATORS	99
P446 PERFORM FLIGHT CONTROL MANUAL TRIM CHECKS	98
P448 PERFORM FLIGHT CONTROL PITCH ATTITUDE STABILIZATION CHECKS	98
P439 PERFORM FLIGHT CONTROL ALTITUDE HOLD OR MACH HOLD CHECKS	98
P423 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL RATE GYROSCOPE ASSEMBLIES	98
P409 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL AUTOPILOT DAMPER PANELS	98
Q480 ISOLATE MALFUNCTIONS TO PITOT-STATIC SYSTEM TURBINE	98
Q481 ISOLATE MALFUNCTIONS TO STANDBY VERTICAL VELOCITY INDICATORS	98
S564 PERFORM OPERATIONAL CHECKS OF FORWARD OR AFT FUEL QUANTITY INDICATORS	98
P449 PERFORM FLIGHT CONTROL ROLL ATTITUDE STABILIZATION CHECKS	98
Q476 ISOLATE MALFUNCTIONS TO ALTITUDE OR VERTICAL VELOCITY INDICATORS	98
Q494 PERFORM OPERATIONAL CHECKS OF PITOT STATIC PROBE HEATERS	98
R533 REMOVE OR INSTALL STANDBY ATTITUDE INDICATORS	98
Q479 ISOLATE MALFUNCTIONS TO PITOT-STATIC PROBES	98
P451 PERFORM FLIGHT CONTROL STABILITY AUGMENTATION CHECKS	97
P412 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL DAMPER SERVO ACTUATORS	97

TABLE A4

REPRESENTATIVE TASKS PERFORMED BY F/FB-111 FIRST-LINE SUPERVISORS (GRP144)

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING (N=7)</u>
E151 MAKE ENTRIES ON MAINTENANCE DISCREPANCY AND WORK DOCUMENT (AFTO FORM 781A)	100
A18 PLAN WORK ASSIGNMENTS	100
E140 MAKE ENTRIES ON CANNIBALIZATION REQUEST (AF FORM 349)	100
E136 MAKE ENTRIES ON AEROSPACE VEHICLE INSPECTION (AFTO FORM 781X)	100
C71 ANALYZE WORKLOAD REQUIREMENTS	100
B29 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	100
B39 INDOCTRINATE NEWLY ASSIGNED PERSONNEL	100
C90 INDORSE AIRMAN PERFORMANCE REPORTS (APR)	100
B34 DIRECT UTILIZATION OF EQUIPMENT, TOOLS, OR SUPPLIES	100
E164 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG (AFTO FORM 350)	100
C98 REVIEW T0s	100
F191 OPERATE AGE, SUCH AS POWER UNITS, HEATERS, COOLING UNITS OR LIGHT CARTS	100
P417 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL PANELS	100
P418 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL PEDAL SHAKERS	100
P419 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL PITCH OR ROLL MIXER ASSEMBLIES	100
P428 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL STICK GRIP ASSEMBLIES	100
P430 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL TRIM SYSTEMS	100
P434 ISOLATE MALFUNCTIONS TO SPOILER BRAKE SYSTEMS	100
P435 ISOLATE MALFUNCTIONS TO STALL INHIBITOR SYSTEMS (SIS)	100
C96 PREPARE APRs	100
P443 PERFORM FLIGHT CONTROL AUTOPILOT QUICK CHECKS	100
P444 PERFORM FLIGHT CONTROL COMPUTER SELF-TESTS	100
P445 PERFORM FLIGHT CONTROL CONSTANT TRACK OR HEADING NAVI- GATION CHECKS	100
P446 PERFORM FLIGHT CONTROL MANUAL TRIM CHECKS	100
P447 PERFORM FLIGHT CONTROL PEDAL SHAKER SYSTEM CHECKS	100
P448 PERFORM FLIGHT CONTROL PITCH ATTITUDE STABILIZATION CHECKS	100
P451 PERFORM FLIGHT CONTROL STABILITY AUGMENTATION CHECKS	100
P452 PERFORM FLIGHT CONTROL STICK SWITCH CONFIDENCE CHECKS	100
P457 PERFORM OPERATIONAL CHECKS OF FLIGHT CONTROL COMPUTERS	100
P458 PERFORM OPERATIONAL CHECKS OF FLIGHT CONTROL ELECTRONIC COMPONENT ASSEMBLIES	100

TABLE A5

REPRESENTATIVE TASKS PERFORMED BY F-15 FLIGHT AND ATTACK CONTROL
MAINTENANCE PERSONNEL (GRP180)

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING (N=7)</u>
F187 INTERPRET AIRCRAFT INTERCONNECTING WIRING DIAGRAMS	100
F190 ISOLATE MALFUNCTIONS TO DEFECTIVE INTERCONNECTING WIRING	100
F214 REMOVE OR INSTALL CANNON-PLUG CONNECTORS	100
F189 ISOLATE MALFUNCTIONS TO AVIONICS RELAY PACKAGES OR RELAY MATRIXES	100
F223 REPAIR WIRING	100
F208 PLUG OR CAP ELECTRICAL OR AIR LINES	100
F226 VISUALLY INSPECT AVIONICS STATUS PANELS	100
F191 OPERATE AGE, SUCH AS POWER UNITS, HEATERS, COOLING UNITS, OR LIGHT CARTS	100
F192 OPERATE HEAT GUNS	100
F218 REMOVE OR INSTALL ELECTRICAL SOLDERLESS CONNECTORS	100
Q488 PERFORM LEAK CHECKS OF PITOT-STATIC SYSTEMS	100
S535 ISOLATE MALFUNCTIONS TO AIR INLET CONTROLLERS OR SPIKE CONTROLLERS	100
P436 OPERATE AUTOMATIC FLIGHTLINE TEST SETS	100
S534 CALIBRATE FUEL QUANTITY INDICATING SYSTEMS	100
F194 OPERATE HYDRAULIC PUMPING UNITS	100
E151 MAKE ENTRIES ON MAINTENANCE DISCREPANCY AND WORK DOCUMENT (AFTO FORM 781A)	100
Q486 OPERATE PRESSURE OR TEMPERATURE TEST SETS	100
Q489 PERFORM OPERATIONAL CHECKS OF ADC OR CADC SYSTEMS	100
R525 PERFORM OPERATIONAL CHECKS OF AHRS	100
F213 REMOVE OR INSTALL AVIONIC SYSTEMS RELAYS	100
F204 PERFORM OPERATIONAL CHECKS OF AVIONICS STATUS PANELS	100
P440 PERFORM FLIGHT CONTROL ALTITUDE OR ATTITUDE HOLD CHECKS	100
S574 REMOVE OR INSTALL AIR INLET CONTROLLERS	100
E164 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG (AFTO FORM 350)	100
Y837 POSITION NONPOWERED OR POWERED AEROSPACE GROUND EQUIPMENT (AGE) TO AIRCRAFT	100
F225 SPLICE ELECTRICAL WIRING	100
Q470 ISOLATE MALFUNCTIONS TO AIR DATA COMPUTERS (ADC) OR CENTRAL AIR DATA COMPUTERS (CADC)	100
Q494 PERFORM OPERATIONAL CHECKS OF PITOT STATIC PROBE HEATERS	100
Q499 REMOVE OR INSTALL ADC OR CADC SYSTEM LRUs	100
S541 ISOLATE MALFUNCTIONS TO FAN OR TURBINE INLET TEMPERATURE INDICATORS	100

TABLE A6
REPRESENTATIVE TASKS PERFORMED BY F-16 MAINTENANCE PERSONNEL (GRP087)

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING (N=45)</u>
F191 OPERATE AGE, SUCH AS POWER UNITS, HEATERS, COOLING UNITS, OR LIGHT CARTS	100
Q489 PERFORM OPERATIONAL CHECKS OF ADC OR CADC SYSTEMS	100
Q488 PERFORM LEAK CHECKS OF PITOT-STATIC SYSTEMS	100
F211 REMOVE OR INSTALL AVIONIC SYSTEMS MINOR HARDWARE SUCH AS SCREWS OR CONTROL KNOBS	100
F189 ISOLATE MALFUNCTIONS TO AVIONICS RELAY PACKAGES OR RELAY MATRIXES	100
T615 PERFORM OPERATIONAL CHECKS OF AOA TRANSMITTERS	100
P428 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL STICK GRIP ASSEMBLIES	100
Q494 PERFORM OPERATIONAL CHECKS OF PITOT-STATIC PROBE HEATERS	100
T597 ISOLATE MALFUNCTIONS TO AOA TRANSMITTERS	100
Q504 REMOVE OR INSTALL PITOT-STATIC PROBES	100
Q479 ISOLATE MALFUNCTIONS TO PITOT-STATIC PROBES	100
P422 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL POWER SUPPLIES	98
P457 PERFORM OPERATIONAL CHECKS OF FLIGHT CONTROL COMPUTERS	98
P411 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL COMPUTERS	98
F187 INTERPRET AIRCRAFT INTERCONNECTING WIRING DIAGRAMS	98
P417 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL PANELS	98
P459 PERFORM OPERATIONAL CHECKS OF FLIGHT CONTROL LATERAL OR NORMAL ACCELEROMETER ASSEMBLIES	98
F186 ADJUST AVIONIC SYSTEMS MINOR HARDWARE SUCH AS SCREWS OR CONTROL KNOBS	98
P431 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL TRIM PANELS	98
T614 PERFORM OPERATIONAL CHECKS OF AOA INDICATORS	98
P423 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL RATE GYROSCOPE ASSEMBLIES	98
P458 PERFORM OPERATIONAL CHECKS OF FLIGHT CONTROL ELECTRONIC COMPONENT ASSEMBLIES	96
P413 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL ELECTRONIC COMPONENT ASSEMBLIES	96
P446 PERFORM FLIGHT CONTROL MANUAL TRIM CHECKS	96
P415 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL LATERAL OR NORMAL ACCELEROMETER ASSEMBLIES	96
T628 REMOVE OR INSTALL AOA TRANSMITTERS	96
P420 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL PNEUMATIC SENSOR ASSEMBLIES	96
T596 ISOLATE MALFUNCTIONS TO AOA INDICATORS	96

TABLE A7

REPRESENTATIVE TASKS PERFORMED BY EF/F/FB-111 INSTRUMENT AND FLIGHT CONTROL SYSTEMS, AND COMMUNICATION, NAVIGATION, AND PENETRATION AIDS(PEN-AIDS) MAINTENANCE PERSONNEL (GRP069)

TASKS	PERCENT MEMBERS PERFORMING (N=6)
F187 INTERPRET AIRCRAFT INTERCONNECTING WIRING DIAGRAMS	100
T628 REMOVE OR INSTALL AOA TRANSMITTERS	100
T597 ISOLATE MALFUNCTIONS TO AOA TRANSMITTERS	100
P461 PERFORM OPERATIONAL CHECKS TO SISs	100
Q494 PERFORM OPERATIONAL CHECKS OF PITOT-STATIC PROBE HEATERS	100
P463 REMOVE OR INSTALL AOA ALPHA OR BETA TRANSMITTER ASSEMBLIES	100
T615 PERFORM OPERATIONAL CHECKS OF AOA TRANSMITTERS	100
P443 PERFORM FLIGHT CONTROL AUTOPILOT QUICK CHECKS	100
P444 PERFORM FLIGHT CONTROL COMPUTER SELF-TESTS	100
R524 PERFORM OPERATIONAL CHECKS OF AFRS ATTITUDE OR HEADING SYSTEMS	100
Q499 REMOVE OR INSTALL ADC OR CADC SYSTEM LRUs	100
G276 OPERATE ATTACK RADAR SYSTEMS	100
P426 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL STALL WARNING RELAY PACKAGES	100
P464 REMOVE OR INSTALL AUTOMATIC FLIGHT CONTROL SYSTEM LRUs	100
I304 REMOVE OR INSTALL INS SYSTEM LRUs	100
I303 ISOLATE MALFUNCTIONS TO INS NAVIGATIONAL COMPUTERS	100
R509 ISOLATE MALFUNCTIONS TO AUXILIARY FLIGHT REFERENCE SYSTEMS (AFRS)	100
P425 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL STALL WARNING SYSTEMS	100
F207 PERFORM TIME COMPLIANCE TECHNICAL ORDER (TCTO) MODIFICATIONS	100
F212 REMOVE OR INSTALL AVIONIC SYSTEMS RELAY PACKAGES OR RELAY MATRIXES	100
U673 PERFORM OPERATIONAL CHECKS OF INTERCOMMUNICATION SYSTEMS	100
U675 PERFORM OPERATIONAL CHECKS OF UHF SYSTEMS	100
Q492 PERFORM OPERATIONAL CHECKS OF AIRSPEED MACH INDICATING SYSTEMS	100
Q501 REMOVE OR INSTALL ALTITUDE VERTICAL SPEED AMPLIFIERS	100
Q475 ISOLATE MALFUNCTIONS TO AIRSPEED MACH INDICATORS	100
R513 ISOLATE MALFUNCTIONS TO AFRS OR AHRS ELECTRONIC CONTROL AMPLIFIERS	100
R514 ISOLATE MALFUNCTIONS TO ATTITUDE DIRECTIONAL INDICATORS (ADI)	100
U681 REMOVE OR INSTALL INTERCOMMUNICATION SYSTEM LRUs	100
F213 REMOVE OR INSTALL AVIONIC SYSTEMS RELAYS	100

TABLE A8

REPRESENTATIVE TASKS PERFORMED BY F-15/16 TRAINING DETACHMENT
(FTD) INSTRUCTORS (GRP080)

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING (N=8)</u>
D107 CONDUCT FORMAL CLASSROOM INSTRUCTION	100
D119 EVALUATE PROGRESS OF STUDENTS	100
D112 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	100
D113 DEMONSTRATE OPERATION OF EQUIPMENT	100
D123 PREPARE LESSON PLANS	100
D102 ADMINISTER OR SCORE TESTS	100
F187 INTERPRET AIRCRAFT INTERCONNECTING WIRING DIAGRAMS	100
F191 OPERATE AGE, SUCH AS POWER UNITS, HEATERS, COOLING UNITS, OR LIGHT CARTS	100
D115 DEVELOP TRAINING AIDS	100
Q488 PERFORM LEAK CHECKS OF PITOT-STATIC SYSTEMS	100
Q486 OPERATE PRESSURE OR TEMPERATURE TEST SETS	100
F208 PLUG OR CAP ELECTRICAL OR AIR LINES	100
D108 CONDUCT FTD TRAINING	88
D111 COUNSEL INDIVIDUALS ON TRAINING PROGRESS	88
D130 WRITE TEST QUESTIONS	88
F453 PERFORM FLIGHTLINE TEST SET CHECKS WITH HYDRAULICS	88
F203 PERFORM COCKPIT INGRESS OR EGRESS PROCEDURES	88
Q489 PERFORM OPERATIONAL CHECKS OF ADC OR CADC SYSTEMS	88
P458 PERFORM OPERATIONAL CHECKS OF FLIGHT CONTROL ELECTRONIC COMPONENT ASSEMBLIES	88
P446 PERFORM FLIGHT CONTROL MANUAL TRIM CHECKS	88
D114 DEVELOP COURSE CURRICULA, PLANS OF INSTRUCTION (POI), OR SPECIALTY TRAINING STANDARDS (STS)	75
E185 UPDATE TO FILES	75
F194 OPERATE HYDRAULIC PUMPING UNITS	75
C98 REVIEW TOS	75
E146 MAKE ENTRIES ON JOB PROFICIENCY GUIDE CONTINUATION SHEET (AF FORM 797)	75
P436 OPERATE AUTOMATIC FLIGHTLINE TEST SETS	75
P457 PERFORM OPERATIONAL CHECKS OF FLIGHT CONTROL COMPUTERS	75
F192 OPERATE HEAT GUNS	75
T614 PERFORM OPERATIONAL CHECKS OF AOA INDICATORS	75
P454 PERFORM FLIGHT LINE TEST SET CHECKS WITHOUT HYDRAULICS	75
F204 PERFORM OPERATIONAL CHECKS OF AVIONICS STATUS PANELS	75
P459 PERFORM OPERATIONAL CHECKS OF FLIGHT CONTROL LATERAL OR NORMAL ACCELEROMETER ASSEMBLIES	75
D124 PROCURE TRAINING AIDS, APCE, OR EQUIPMENT	63
P444 PERFORM FLIGHT CONTROL COMPUTER SELF-TESTS	63

TABLE A9
REPRESENTATIVE TASKS PERFORMED BY ADMINISTRATIVE MANAGERS (GRP033)

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING (N=8)</u>
A7 DEVELOP RECORDS OR MAINTENANCE AND DISPOSITION FILES	88
E167 MAKE ENTRIES ON SIGNIFICANT HISTORICAL DATA (AFTO FORM 95)	75
C70 ANALYZE CAUSES OF OPERATIONAL DISCREPANCIES	75
E181 UPDATE MAINTENANCE DATA RECORDS	63
A3 COORDINATE WORK WITH OTHER SECTIONS	63
E155 MAKE ENTRIES ON ON-THE-JOB TRAINING RECORD CONTINUATION SHEET (AF FORM 623A)	63
E177 TYPE INFORMATION ON FORMS	50
C81 EVALUATE MAINTENANCE CAPABILITIES OF SECTIONS	50
A11 ESTABLISH PERFORMANCE STANDARDS	50
E132 DESIGN LOCAL WORKSHEETS OR FORMS	50
A5 DETERMINE WORK PRIORITIES	50
B30 DIRECT DEVELOPMENT OR MAINTENANCE OF STATUS BOARDS, GRAPHS, OR CHARTS	50
C96 PREPARE APRs	50
D109 CONDUCT OJT	50
A8 DEVELOP WORK METHODS OR PROCEDURES	50
E156 MAKE ENTRIES ON ON-THE-JOB TRAINING RECORD (AF FORM 623)	50
B29 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	50
E146 MAKE ENTRIES ON JOB PROFICIENCY GUIDE CONTINUATION SHEET (AF FORM 797)	50

TABLE A10

REPRESENTATIVE TASKS PERFORMED BY QUALITY CONTROL (QC) INSPECTORS (GRP050)

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING (N=6)</u>
C75 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	100
C78 EVALUATE INSPECTION REPORTS OR PROCEDURES	100
C98 REVIEW TOs	100
C92 INSPECT FACILITIES OR WORK AREAS FOR CONDITION OR APPEARANCE	100
C94 PERFORM SAFETY INSPECTIONS	100
C80 EVALUATE LOCAL DIRECTIVES OR OPERATING PROCEDURES	100
C97 PROVIDE TECHNICAL ASSISTANCE FOR JOB RELATED PROBLEMS ENCOUNTERED BY SUBORDINATES	100
E151 MAKE ENTRIES ON MAINTENANCE DISCREPANCY AND WORK DOCUMENT (AFTO FORM 781A)	100
C93 INVESTIGATE ACCIDENTS OR INCIDENTS	100
C76 EVALUATE EQUIPMENT MODIFICATIONS OR TECHNICAL ORDER (TO) CHANGES	100
E163 MAKE ENTRIES ON QUALITY CONTROL INSPECTION SUMMARY (AF FORM 2420)	83
E165 MAKE ENTRIES ON ROUTING AND REVIEW OF QUALITY CONTROL REPORTS (AF FORM 2419)	83
C81 EVALUATE MAINTENANCE CAPABILITIES OF SECTIONS	83
C70 ANALYZE CAUSES OF OPERATIONAL DISCREPANCIES	83
B42 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	83
F187 INTERPRET AIRCRAFT INTERCONNECTING WIRING DIAGRAMS	83
E172 MAKE ENTRIES ON TECHNICAL ORDER SYSTEMS PUBLICATION IMPROVEMENT REPORT AND REPLAY (AFTO FORM 22)	83
C88 EVALUATE UTILIZATION OF PERSONNEL	83
C84 EVALUATE SAFETY PROGRAMS	83
C86 EVALUATE SUGGESTIONS	83
E134 DRAFT RECOMMENDATIONS FOR CHANGES TO TECHNICAL DIRECTIVES	67
C73 EVALUATE ALERT OR EMERGENCY PROCEDURES	67
D119 EVALUATE PROGRESS OF STUDENTS	67
A23 SCHEDULE INSPECTIONS	67
F226 VISUALLY INSPECT AVIONICS STATUS PANELS	67
C87 EVALUATE USE OF WORKSPACE, EQUIPMENT, OR SUPPLIES	67
C85 EVALUATE SECURITY PROGRAMS	67
C100 WRITE STAFF STUDIES OR SURVEYS, OR REPORTS	67
C72 EVALUATE ADMINISTRATIVE FORMS, FILES, OR PROCEDURES	67

TABLE A11
REPRESENTATIVE TASKS PERFORMED
BY SUPERVISION AND MANAGEMENT PERSONNEL (GRP042)

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING (N=11)</u>
A3 COORDINATE WORK WITH OTHER SECTIONS	100
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	100
A5 DETERMINE WORK PRIORITIES	91
A18 PLAN WORK ASSIGNMENTS	91
C96 PREPARE APRs	91
C97 PROVIDE TECHNICAL ASSISTANCE FOR JOB RELATED PROBLEMS ENCOUNTERED BY SUBORDINATES	91
B29 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	91
E156 MAKE ENTRIES ON ON-THE-JOB TRAINING RECORD (AF FORM 623)	91
B39 INDOCTRINATE NEWLY ASSIGNED PERSONNEL	91
E155 MAKE ENTRIES ON ON-THE-JOB TRAINING RECORD CONTINUATION SHEET (AF FORM 623A)	91
A24 SCHEDULE LEAVES OR PASSES	91
A2 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	91
B32 DIRECT MAINTENANCE OR CHECKOUT OF INTEGRATED AVIONIC SYSTEMS	82
C90 INDORSE AIRMAN PERFORMANCE REPORTS (APR)	82
B42 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	82
E149 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD (AFTO FORM 349)	82
D111 COUNSEL INDIVIDUALS ON TRAINING PROGRESS	82
E146 MAKE ENTRIES ON JOB PROFICIENCY GUIDE CONTINUATION SHEET (AF FORM 797)	82
D109 CONDUCT OJT	82
A19 PREPARE DUTY ROSTERS	82
D113 DEMONSTRATE OPERATION OF EQUIPMENT	82
B40 INITIATE PERSONNEL ACTION REQUESTS	82
A4 DETERMINE REQUIREMENTS FOR PERSONNEL, SPACE, EQUIPMENT, OR SUPPLIES	82
A26 WRITE JOB DESCRIPTIONS	82
B64 SUPERVISE INTEGRATED AVIONIC INSTRUMENT AND FLIGHT CONTROL SYSTEM SPECIALISTS (AFSC 32657A)	73
C88 EVALUATE UTILIZATION OF PERSONNEL	73
B41 INITIATE PUNITIVE ACTIONS OR RECOGNITION FOR COMMENDABLE PERFORMANCES	73
E164 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG (AFTO FORM 350)	73
D121 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	73
D105 ASSIGN ON-THE-JOB TRAINING (OJT) TRAINERS	73
B33 DIRECT SECTION ACTIVITIES OTHER THAN MAINTENANCE	73

TABLE A12

REPRESENTATIVE TASKS PERFORMED BY TECHNICAL SCHOOL INSTRUCTORS (GRP057)

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING (N=9)</u>
D123 PREPARE LESSON PLANS	100
D102 ADMINISTER OR SCORE TESTS	100
D107 CONDUCT FORMAL CLASSROOM INSTRUCTION	89
D119 EVALUATE PROGRESS OF STUDENTS	78
D114 DEVELOP COURSE CURRICULA, PLANS OF INSTRUCTION (POI), OR SPECIALTY TRAINING STANDARDS (STS)	67
D115 DEVELOP TRAINING AIDS	67
D130 WRITE TEST QUESTIONS	56
D111 COUNSEL INDIVIDUALS ON TRAINING PROGRESS	56
D112 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	56
D113 DEMONSTRATE OPERATION OF EQUIPMENT	56
D121 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	44
D120 EVALUATE TRAINING METHODS, TECHNIQUES, OR MATERIALS	44
B29 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED MATTERS	44

APPENDIX B

TABLE B1

MOST WIDELY PERFORMED INVENTORY TASKS NOT REFERENCED TO THE 326X7A
SPECIALTY TRAINING STANDARD (STS)

<u>TASKS</u>	<u>A-SHRED FIRST ENLISTMENT PERCENT MEMBERS PERFORMING</u>
F187 INTERPRET AIRCRAFT INTERCONNECTING WIRING DIAGRAMS	83
F223 REPAIR WIRING	83
F191 OPERATE AGE, SUCH AS POWER UNITS, HEATERS, COOLING UNITS, OR LIGHT CARTS	82
R510 ISOLATE MALFUNCTIONS TO AFRS BEARING DISTANCE HEADING INDICATORS	82
T603 ISOLATE MALFUNCTIONS TO MISCELLANEOUS SWITCH PANELS	80
F190 ISOLATE MALFUNCTIONS TO DEFECTIVE INTERCONNECTING WIRING	79
F212 REMOVE OR INSTALL AVIONIC SYSTEMS RELAY PACKAGES OR RELAY MATRIXES	79
F189 ISOLATE MALFUNCTIONS TO AVIONICS RELAY PACKAGES OR RELAY MATRIXES	78
P461 PERFORM OPERATIONAL CHECKS TO STSs	78
T619 PERFORM OPERATIONAL CHECKS OF MISCELLANEOUS SWITCH PANELS	77
T635 REMOVE OR INSTALL MISCELLANEOUS SWITCH PANELS	77
P407 BORESIGHT ANGLE-OF-ATTACK (AOA) TRANSMITTERS	72
P458 PERFORM OPERATIONAL CHECKS OF FLIGHT CONTROL ELECTRONIC COMPONENT ASSEMBLIES	71
P408 BORESIGHT BETA TRANSMITTER ASSEMBLIES	69
S535 ISOLATE MALFUNCTIONS TO AIR INLET CONTROLLERS OF SPIKE CONTROLLERS	64
P453 PERFORM FLIGHT LINE TEST SET CHECKS WITH HYDRAULICS	63
F213 REMOVE OR INSTALL AVIONIC SYSTEMS RELAYS	62
P454 PERFORM FLIGHTLINE TEST SET CHECKS WITHOUT HYDRAULICS	61
S536 ISOLATE MALFUNCTIONS TO BLEED AIR INDICATORS	60
F194 OPERATE HYDRAULIC PUMPING UNITS	59

TABLE B2

MOST WIDELY PERFORMED INVENTORY TASKS NOT REFERENCED TO THE 326X7B
SPECIALTY TRAINING STANDARD (STS)

<u>TASKS</u>	<u>B-SHRED</u>
	<u>FIRST</u>
	<u>ENLISTMENT</u>
	<u>PERCENT</u>
	<u>MEMBERS</u>
	<u>PERFORMING</u>
F191 OPERATE AGE, SUCH AS POWER UNITS, HEATERS, COOLING UNITS, OR LIGHT CARTS	89
F187 INTERPRET AIRCRAFT INTERCONNECTING WIRING DIAGRAMS	86
F190 ISOLATE MALFUNCTIONS TO DEFECTIVE INTERCONNECTING WIRING	86
F204 PERFORM OPERATIONAL CHECKS OF AVIONICS STATUS PANELS	84
F223 REPAIR WIRING	84
F226 VISUALLY INSPECT AVIONICS STATUS PANELS	82
F188 ISOLATE MALFUNCTIONS IN AVIONICS STATUS PANELS	81
F198 OPERATE PROXIMITY SWITCH CONTROL BOXES	81
F224 RESET FAULT INDICATOR LATCHES	81
Q476 ISOLATE MALFUNCTIONS TO ALTITUDE OR VERTICAL VELOCITY INDICATORS	79
F189 ISOLATE MALFUNCTIONS TO AVIONICS RELAY PACKAGES OR RELAY MATRIXES	77
F213 REMOVE OR INSTALL AVIONIC SYSTEMS RELAYS	76
F207 PERFORM TIME COMPLIANCE TECHNICAL ORDER (TCTO) MODIFICATIONS	73
Y851 WALK WINGS OR TAILS DURING AIRCRAFT TOWING OPERATIONS	66
F212 REMOVE OR INSTALL AVIONIC SYSTEMS RELAY PACKAGES OR RELAY MATRIXES	65
Q468 ADJUST SIGNAL DATA RECORDER POSITION TRANSMITTERS	61
T623 PERFORM OPERATIONAL CHECKS OF TRUE AIRSPEED INDICATORS	60
Y838 POSITION OR REMOVE AIRCRAFT CHOCKS	58
F194 OPERATE HYDRAULIC PUMPING UNITS	57
F216 REMOVE OR INSTALL ELECTRICAL CIRCUIT BREAKERS	57
T640 REMOVE OR INSTALL TRUE AIRSPEED INDICATOR	57

TABLE B3

MOST WIDELY PERFORMED INVENTORY TASKS NOT REFERENCED TO THE 326X7C
SPECIALTY TRAINING STANDARD (STS)

<u>TASKS</u>	<u>C-SHRED</u>
	<u>FIRST</u>
	<u>ENLISTMENT</u>
	<u>PERCENT</u>
	<u>MEMBERS</u>
	<u>PERFORMING</u>
F189 ISOLATE MALFUNCTIONS TO AVIONICS RELAY PACKAGES OR RELAY MATRIXES	92
F191 OPERATE AGE, SUCH AS POWER UNITS, HEATERS, COOLING UNITS, OR LIGHT CARTS	92
F187 INTERPRET AIRCRAFT INTERCONNECTING WIRING DIAGRAMS	89
F212 REMOVE OR INSTALL AVIONIC SYSTEMS RELAY PACKAGES OR RELAY MATRIXES	89
P424 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL SIDE-SLIP DIFFERENTIAL PRESSURE SENSORS	89
F204 PERFORM OPERATIONAL CHECKS OF AVIONICS STATUS PANELS	85
F213 REMOVE OR INSTALL AVIONIC SYSTEMS RELAYS	85
F188 ISOLATE MALFUNCTIONS IN AVIONICS STATUS PANELS	81
F190 ISOLATE MALFUNCTIONS TO DEFECTIVE INTERCONNECTING WIRING	81
F220 REMOVE OR INSTALL INSTRUMENT GLARE SHIELDS	81
P444 PERFORM FLIGHT CONTROL COMPUTER SELF-TESTS	81
Q476 ISOLATE MALFUNCTIONS TO ALTITUDE OR VERTICAL VELOCITY INDICATORS	81
T595 ISOLATE MALFUNCTIONS TO ANGLE-OF-ATTACK (AOA) INDEXERS	81
Y851 WALK WINGS OR TAILS DURING AIRCRAFT TOWING OPERATIONS	81
F194 OPERATE HYDRAULIC PUMPING UNITS	77
F207 PERFORM TIME COMPLIANCE TECHNICAL ORDER (TCTO) MODIFICATIONS	77
F226 VISUALLY INSPECT AVIONICS STATUS PANELS	77
P407 BORESIGHT ANGLE-OF-ATTACK (AOA) TRANSMITTERS	77
P421 ISOLATE MALFUNCTIONS TO FLIGHT CONTROL PNEUMATIC SENSOR ASSEMBLY MANIFOLDS	77
P416 ISOLATE MALFUNCTIONS TO FLIGH CONTROL OVERRIDE SWITCHES	77

7-8